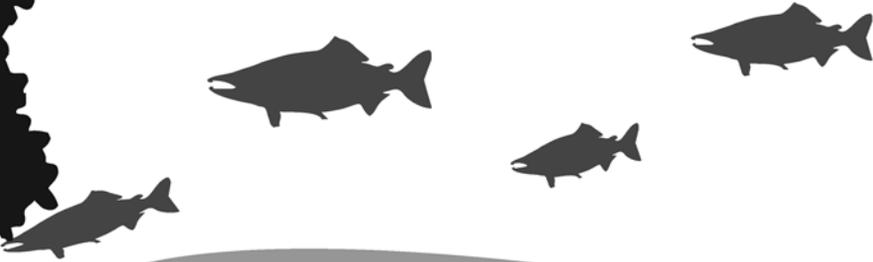


ADULT LITERACY FUNDAMENTAL MATHEMATICS

Book One



ABE

Adult Literacy Fundamental Mathematics

Book 1

Prepared by Wendy Tagami

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Adult Literacy Fundamental Mathematics, Instructor's Manual and Test-Bank

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Table of Contents – Book 1

Unit 1: Number Sense

Topic A: Emotions and Learning	2
Math Anxiety.....	3
How to Deal with Math Anxiety	4
Topic B: Counting	5
Topic B: Self-Test	12
Topic C: Place Value	14
Reading and Writing Numerals.....	27
Topic C: Self-Test	36
Topic D: Ordering Numerals	38
Greater Than, Less Than, Equals	42
Topic D: Self-Test	43
Topic E: Rounding Numbers	44
Rounding to the Nearest Ten.....	45
Topic F: More Counting	55
Topic F: Self-Test.....	63
Unit 1 Review - Number Sense	66

Unit 2: Addition

Topic A: Addition	76
Adding Across	99
Word Problems	103
Topic A: Self-Test	106
Topic B: Addition of Three or More Numbers	109
Perimeter.....	121
Topic B: Self-Test	124
Topic C: Addition of Larger Numbers	127
Topic C: Self-Test	138
Unit 2 Review - Addition	141

Unit 3: Subtraction

Topic A: Subtraction	150
Subtracting Across	174
Word Problems.....	178
Topic A: Self-Test	181
Topic B: Subtraction of Larger Numbers	184
Topic B: Self-Test	196
Unit 3 Review - Subtraction	199

Unit 4: Estimating, Time & Shapes

Topic A: Estimating	206
Topic B: Time	214
A.M. and P.M.	217
Rounding Time	219
Topic C: Shapes	221
Unit 4 Review – Estimating, Time, Shapes	228
Book 1 Review	237
Glossary	254

To the Learner:

Welcome to Fundamental Mathematics Book One.

Adult Math Learners

You have the skills you need to be a strong student in this class.

Adult math learners have many skills. They have a lot of life experience. They also use math in their everyday lives. This means that adult math learners may already know some of what is being taught in this book. Use what you already know with confidence!

Grades Record

You have also been given a sheet to write down your grades. After each test, you can write in the mark. This way you can keep track of your grades as you go through the course. This is a good idea to use in all your courses. You can find this grade sheet at the end of the book.

How to Use this Book

This textbook has:

- ✓ A **Table of Contents** listing the units, the major topics and subtopics.
- ✓ A **Glossary** giving definitions for mathematical vocabulary used in the course.
- ✓ A **grades record** to keep track of your marks.

The textbook has many exercises; some are quite short, but others have a great number of questions. **You do not have to do every single question!**

- Do as many questions as **you** feel are necessary for you to be confident in your skill.
- It is best to do **all** the word problems.
- If you leave out some questions, try doing every second or every third question. Always do some questions from the end of each exercise because the questions usually get harder at the end. You might use the skipped questions for review before a test.
- If you are working on a difficult skill or concept, do half the exercise one day and finish the exercise the next day. That is a much better way to learn.

Self-tests at the end of most topics have an **Aim** at the top. If you do not meet the aim, talk to your instructor, find what is causing the trouble, and do some more review before you go on.

A **Review and Extra Practice** section is at the end of each unit. If there is an area of the unit that you need extra practice in, you can use this. Or, if you want, you can use the section for more review.

A **Practice Test** is available for each unit. You may:

- Write the practice test after you have studied the unit as a practice for the end-of-chapter test, OR
- You might want to write it before you start the unit to find what you already know and which areas you need to work on.

Unit tests are written after each unit. Again, you must reach the **Aim** before you begin the next unit. If you do not reach the aim, the instructor will assist you in finding and practising the difficult areas. When you are ready, you can write a B test to show that you have mastered the skills.

A **Final Test** is to be written when you have finished the book. This final test will assess your skills from the whole book. You have mastered the skills in each unit and then kept using many of them throughout the course. The test reviews all those skills.

Grades Record Book 1

Unit	Practice Test	Date of Test A	Test A	Date of Test B	Test B
<i>Example</i>	√	<i>Sept. 4, 2011</i>	$\frac{25}{33}$	<i>Sept. 7, 2011</i>	$\frac{28}{33}$
1					
2					
3					
4					
Final Test					

Unit 1

Number Sense

Topic A: Emotions and Learning

Emotions, or what we feel about something, play a big part in how we learn. If we are calm, we learn well. If we are afraid or stressed, we do not learn as well. Many people are afraid of math. They fear making a mistake. “Math anxiety” is the fear of math.

People who suffer from math anxiety may get headaches, sick stomachs, cold hands or they may just sweat a lot or just feel scared.

Do you suffer from math anxiety?

Read the list below and put a check mark (✓) beside the ones you feel.

	Are your palms moist?
	Is your stomach fluttering?
	Do you feel like you can't think clearly?
	Do you feel like you would rather do anything else than learning math?
	Are you breathing faster than normal?
	Is your heart pounding?
	Do you feel cold?

Add any other things you are feeling.

Math Anxiety

“Math anxiety” or the fear of math is a learned habit. If it is learned, it can be unlearned. Most math anxiety comes from bad memories while learning math. It may be from doing badly on a test or asking a question then being made fun of. These bad memories can make learning math hard.

Everyone can learn math. There is no special talent for math. There are some people who are better at math than others, but even these people had to **learn** to be good at math.

How to Deal with Math Anxiety

Anyone can feel anxiety that will slow down learning. The key to learning is to be the “boss” of your anxiety.

One way to be the “boss” is to relax. Try this breathing exercise.

Start by breathing in slowly to the count of four. It may help to close your eyes and count. Now hold your breath for four counts and then let your breath out slowly to the count of four. The counting is silent and should follow this pattern: “breathe in, two, three four; hold, two, three, four; breathe out, two, three, four; wait, two, three four.” With practice, the number of counts can be increased. This is an easy and good way to relax.

Now try this exercise quietly and repeat it five times slowly.

Each time you feel anxious about learning, use the breathing exercise to help calm yourself. Ask yourself if what you tried worked. Do you feel calmer?

Remember learning to deal with your math anxiety may take some time. It took you a long time to learn “math anxiety”, so it will take some time to overcome it.

Topic B: Counting

To learn to read, you first need to learn the letters of the alphabet. Once you know the alphabet, you put the letters together to make words, then sentences, then paragraphs and then stories. Those letters become the “tools” used to write everything.

The same is true for math. In math we use **digits**. The **digits** are:

0 1 2 3 4 5 6 7 8 9

Digits are named after our fingers. Our fingers are also called digits. The mathematics term comes from the days of counting on our fingers. We have ten fingers and there are ten digits. We use the letters of the alphabet to make up words, and we use digits to make up numbers. There are two ways to write numbers. You can write them as numerals. You can write them using word names.

Numeral	Word Name
0	zero
1	one
2	two
3	three
4	four
5	five
6	six
7	seven
8	eight
9	nine

Counting is matching the number name to the things being counted. You see a bowl of apples on the table. You want to know how many apples are in the bowl. You answer that question by saying “There are one, two, three, four apples.” You are giving the number names “one”, “two”, “three,” and “four” to the apples. The last number you say is the total number of apples.

Exercise One

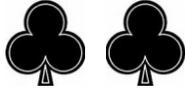
Count the number of shapes in each picture. Then write the numeral and the word name. Check your work using the answer key at the end of the exercise.

Example:



Numeral: 3
Word name: three

a)



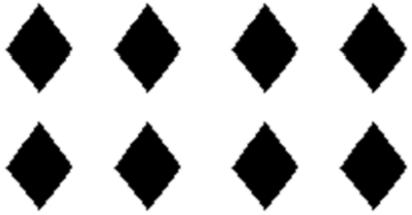
Numeral:
Word Name:

b)



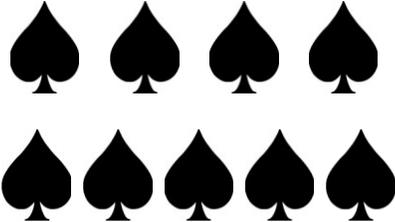
Numeral:
Word Name:

c)



Numeral:
Word Name

d)



Numeral:
Word Name:

e)



Numeral:

Word Name:

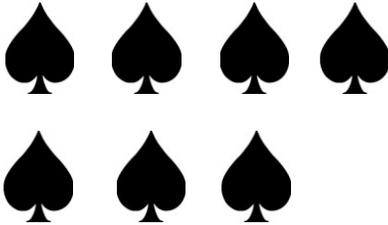
f)



Numeral:

Word Name:

g)



Numeral:

Word Name:

h)



Numeral:

Word Name:

i)

Numeral:

Word Name:

Exercise One – Answer Key

a) 2, two

d) 9, nine

g) 7, seven

b) 6, six

e) 1, one

h) 4, four

c) 8, eight

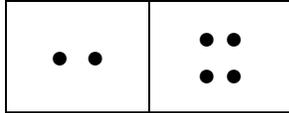
f) 5, five

i) 0, zero

Need More Practice?

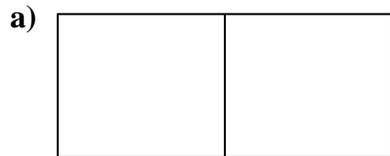
Ask your instructor for the dominoes to do this page. Take the dominoes zero-zero to five-five. Flip them over so you cannot see the dots. Pick a domino and flip it over. Draw the number of dots then count the number of dots. Write the numeral and word name. Have your instructor check these for you.

Example:



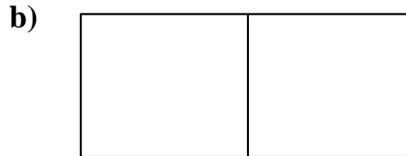
Numeral: 6

Word Name: six



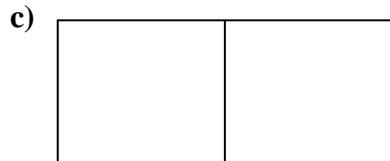
Numeral:

Word Name:



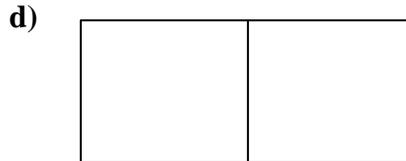
Numeral:

Word Name:



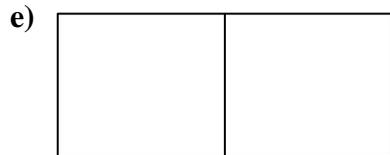
Numeral:

Word Name:



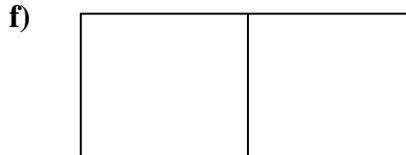
Numeral:

Word Name:



Numeral:

Word Name:



Numeral:

Word Name:

Exercise Two

Here are the numerals from one to ten.

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Practice writing them below.

--	--	--	--	--	--	--	--	--	--

Now practice writing the numerals from one to ten in the following. Try to do them without looking. Check your work using the answer key at the end of the exercise.

a)

1		3		5		7		9	
---	--	---	--	---	--	---	--	---	--

b)

	2		4		6		8		10
--	---	--	---	--	---	--	---	--	----

c)

1			4			7			
---	--	--	---	--	--	---	--	--	--

d)

		3			6			9	
--	--	---	--	--	---	--	--	---	--

e)

1			4			7			
---	--	--	---	--	--	---	--	--	--

f)

1				5				9	
---	--	--	--	---	--	--	--	---	--

g)

1					6				
---	--	--	--	--	---	--	--	--	--

h)

				5					
--	--	--	--	---	--	--	--	--	--

i)

--	--	--	--	--	--	--	--	--	--

Answers to Exercise Two

a)

	2		4		6		8		10
--	---	--	---	--	---	--	---	--	----

b)

1		3		5		7		9	
---	--	---	--	---	--	---	--	---	--

c)

	2	3		5	6		8	9	10
--	---	---	--	---	---	--	---	---	----

d)

1	2		4	5		7	8		10
---	---	--	---	---	--	---	---	--	----

e)

	2	3		5	6		8	9	10
--	---	---	--	---	---	--	---	---	----

f)

	2	3	4		6	7	8		10
--	---	---	---	--	---	---	---	--	----

g)

	2	3	4	5		7	8	9	10
--	---	---	---	---	--	---	---	---	----

h)

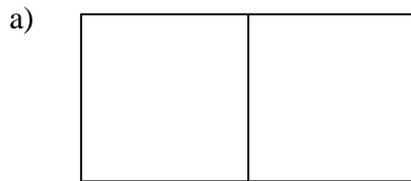
1	2	3	4		6	7	8	9	10
---	---	---	---	--	---	---	---	---	----

i)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

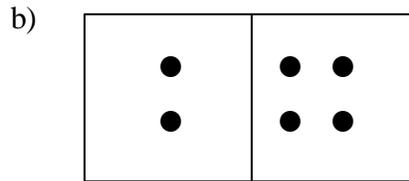
A. Count the number of things in each picture, then write the numeral and the word name.

8 marks



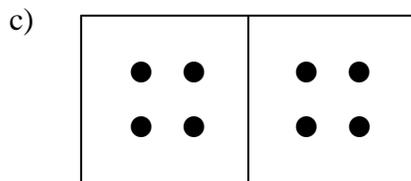
Numeral:

Word Name:



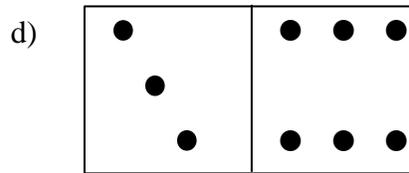
Numeral:

Word Name:



Numeral:

Word Name:



Numeral:

Word Name:

B. Write the numerals from one to 10.

10 marks

--	--	--	--	--	--	--	--	--	--

Topic B: Self-Test – Answer Key

A:

- a) 0, zero b) 6, six c) 8, eight d) 9, nine

B:

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Emotions Check

How are you feeling? Are your palms moist? How is your breathing?
Take control. Be the boss. If you are feeling anxious, practice your breathing exercise.

Remember: breathe in slowly to the count of four, hold it for the count of four and breathe out slowly to the count of four.

Topic C: Place Value

As you know, we count much higher than ten in our world.

Each **place** in a number has a **value**.

- The **ones place** tells how many ones there are.

3 means 3 ones □ □ □

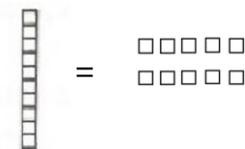
0 means 0 ones

9 means 9 ones □ □ □ □ □ □ □ □ □

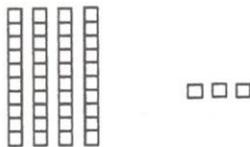
9 is the largest amount that we can express (write or say) with one digit.

- The **tens place** shows how many tens there are. The ones place must have a digit in it before there can be a digit in the tens place.

Every ten is **ten ones**.



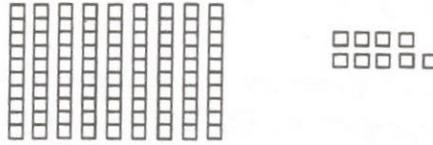
43 means 4 tens and 3 ones



20 means 2 tens and 0 ones. The zero holds the ones place.



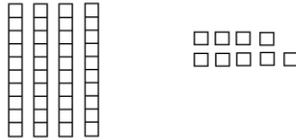
99 means 9 tens and 9 ones. 99 is the largest amount that we can express (write or say) using only two digits.



Exercise One

Fill in the blanks to make each sentence true. Draw a picture for questions **c, f, h and j** like the examples. Check your work using the answer key at the end of the exercise. Ask your instructor to check your sketches.

Example: 49 means 4 tens and 9 ones



a) 37 means _____ tens and _____ ones.

b) 65 means _____ tens and _____ ones.

c) 56 means _____ tens and _____ ones.

(Draw your picture below.)

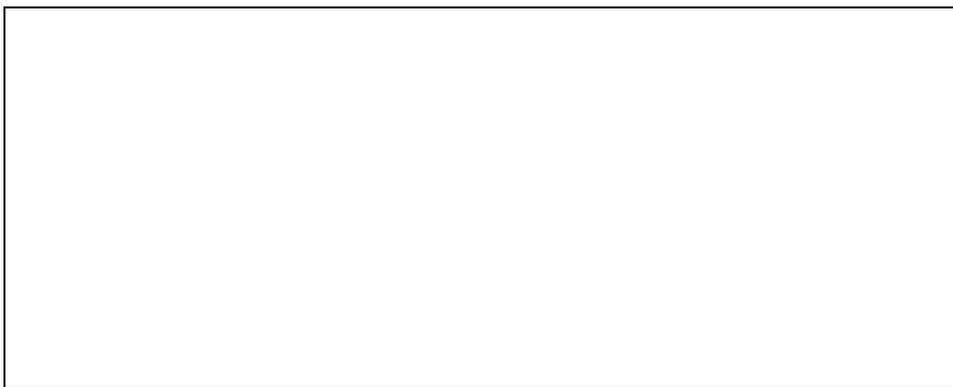


d) 87 means _____ tens and _____ ones.

e) 33 means _____ tens and _____ ones.

f) 60 means _____ tens and _____ ones.

(Draw your picture below.)



g) 70 means _____ tens and _____ ones.

h) 44 means _____ tens and _____ ones.

(Draw your picture below.)



i) 98 means _____ tens and _____ ones.

j) 75 means _____ tens and _____ ones.

(Draw your picture below.)



Exercise One – Answer Key

a) 3 tens, 7 ones

b) 6 tens, 5 ones

c) 5 tens, 6 ones

d) 8 tens, 7 ones

e) 3 tens, 3 ones

f) 6 tens, 0 ones

g) 7 tens, 0 ones

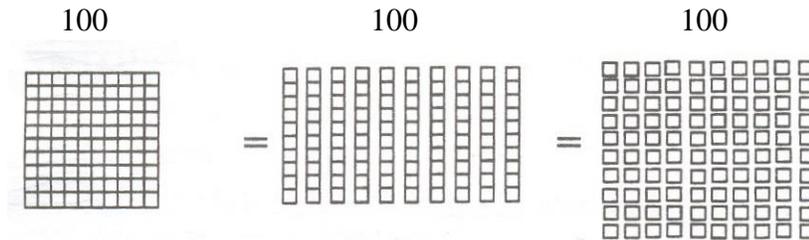
h) 4 tens, 4 ones

i) 9 tens, 8 ones

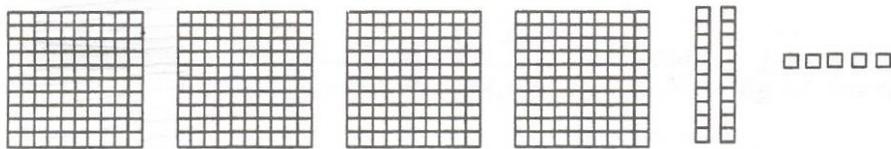
j) 7 tens, 5 ones

The place to the left of the tens place is the **hundreds place**. It shows how many hundreds there are. A number written using three whole digits has a hundreds place, a tens place, and a ones place.

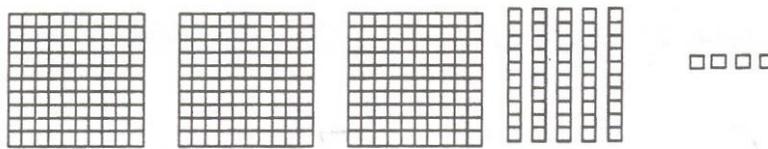
Every hundred is **ten tens** – every hundred is the same as one hundred ones.



425 means 4 hundreds, 2 tens, and 5 ones.



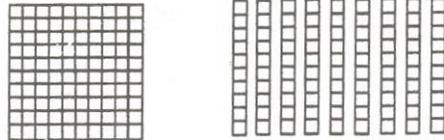
354 means 3 hundreds, 5 tens, and 4 ones.



Exercise Two

Fill in the blanks to make each sentence true. Draw a picture for questions **c**, **e**, and **h**, like the examples. Check your work using the answer key at the end of the exercise. Ask your instructor to check your sketches.

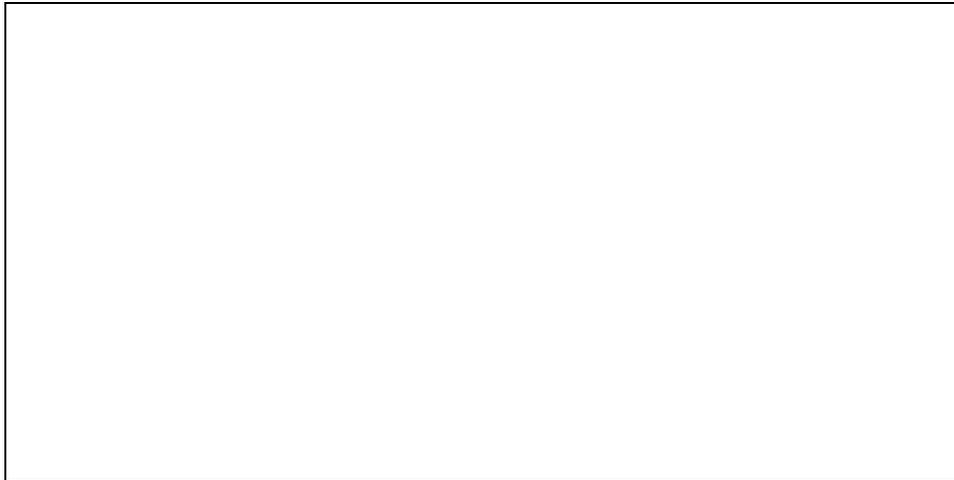
a) $190 =$ 1 hundreds, 9 tens, 0 ones



b) $555 =$ _____ hundreds, _____ tens, _____ ones

c) $309 =$ _____ hundreds, _____ tens, _____ ones

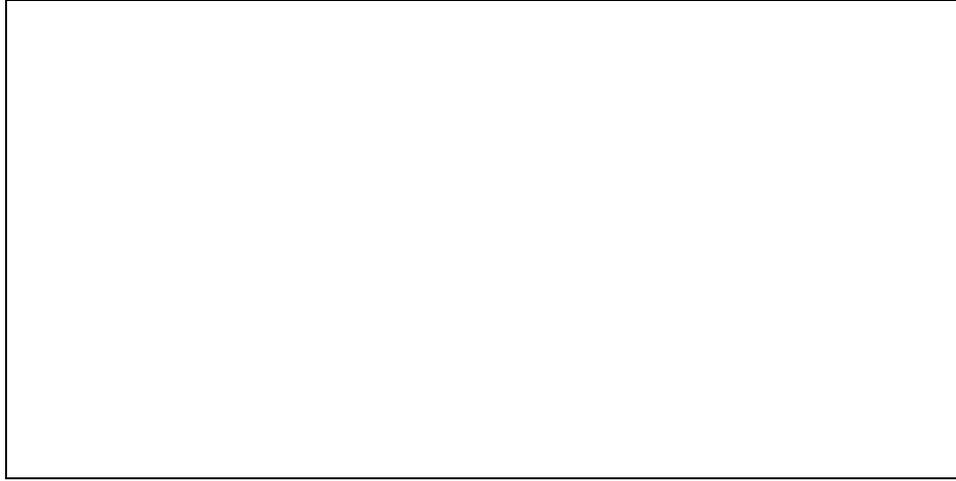
(Draw your picture below.)



d) $499 =$ _____ hundreds, _____ tens, _____ ones

e) $480 =$ _____ hundreds, _____ tens, _____ ones

(Draw your picture below.)



f) $999 =$ _____ hundreds, _____ tens, _____ ones

g) $657 =$ _____ hundreds, _____ tens, _____ ones

h) $125 =$ _____ hundreds, _____ tens, _____ ones

(Draw your picture below.)



i) 212 = _____ hundreds, _____ tens, _____ ones

Answers to Exercise Two

b) 5 hundreds, 5 tens, 5 ones

c) 3 hundreds, 0 tens, 9 ones

d) 4 hundreds, 9 tens, 9 ones

e) 4 hundreds, 8 tens, 0 ones

f) 9 hundreds, 9 tens, 9 ones

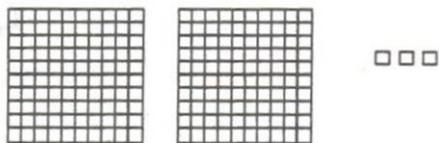
g) 6 hundreds, 5 tens, 7 ones

h) 1 hundred, 2 tens, 5 ones

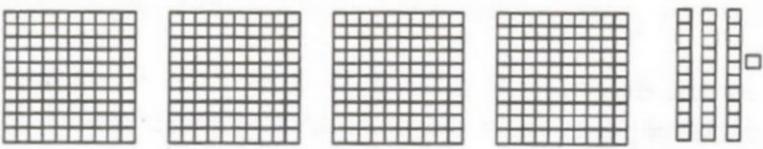
i) 2 hundreds, 1 ten, 2 ones

Exercise Three

Count the hundreds, tens, and ones shown in the drawings.
The pictures will help you understand the quantity of a number.
Then write the numeral. The first one is done for you. Check
your work using the answer key at the end of the exercise.

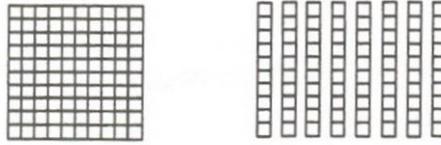
a) 

_____ 2 _____ hundreds _____ 0 _____ tens _____ 3 _____ ones = 203

b) 

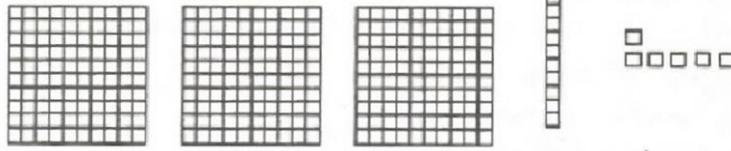
_____ hundreds _____ tens _____ ones = _____

c)



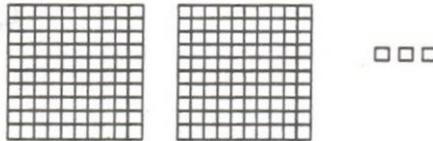
_____ hundreds _____ tens _____ ones = _____

d)



_____ hundreds _____ tens _____ ones = _____

e)



_____ hundreds _____ tens _____ ones = _____

Answers to Exercise Three

b) 4 hundreds, 3 tens, 1 one, 431

d) 3 hundreds, 1 ten, 6 ones, 316

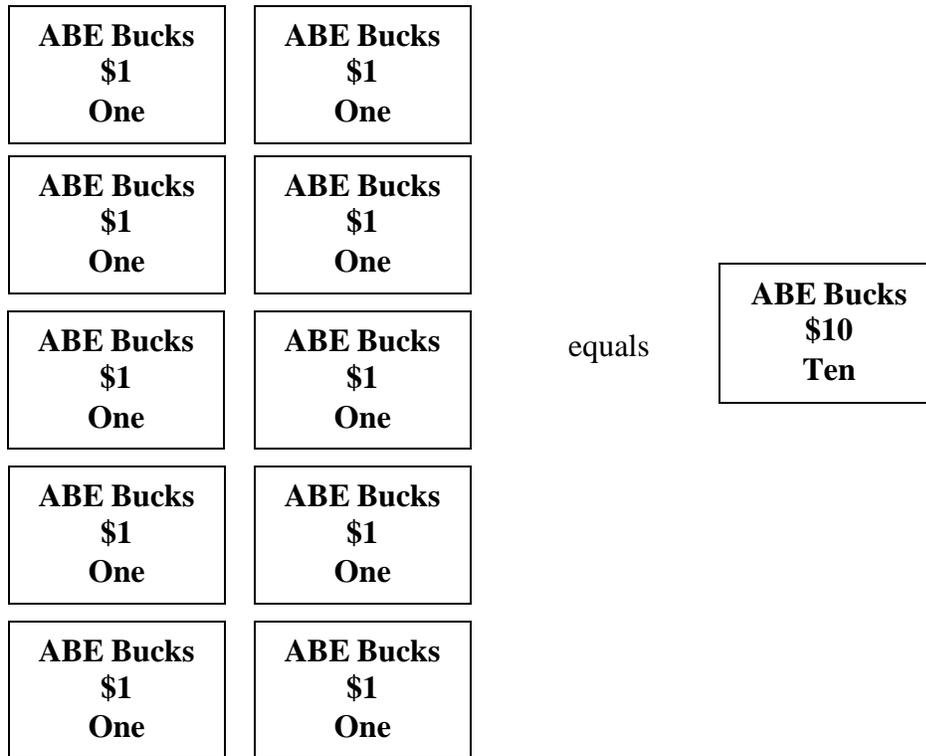
c) 1 hundred, 8 tens, 0 ones, 180

e) 2 hundreds, 0 tens, 3 ones, 203

Need more practice?

Ask your instructor for some play money. Using the one, ten and hundred dollar bills practice trading ten of one type of bill for one of the next value.

Example:



Exercise Four

Write the place value name (ones, tens, hundreds) for each underlined digit. Check your work using the answer key at the end of the exercise.

- | | | | |
|-----------------|-----------------|-----------------|-------------|
| a) <u>6</u> 22 | <u>hundreds</u> | b) 4 <u>6</u> 8 | <u>tens</u> |
| c) 9 <u>2</u> 0 | _____ | d) <u>9</u> 20 | _____ |
| e) 6 <u>4</u> 8 | _____ | f) 4 <u>2</u> 6 | _____ |
| g) <u>5</u> 34 | _____ | h) 5 <u>5</u> 5 | _____ |
| i) 4 <u>5</u> 1 | _____ | j) 90 <u>1</u> | _____ |
| k) <u>2</u> 26 | _____ | l) 48 <u>6</u> | _____ |

Answers to Exercise Four

- | | | |
|---------|-------------|-------------|
| c) ones | d) hundreds | e) tens |
| f) ones | g) hundreds | h) tens |
| i) tens | j) ones | k) hundreds |
| l) ones | | |

Exercise Five

Underline the digit for the place value named. Check your work using the answer key at the end of the exercise.

- | | | | |
|-------------|-----|-------------|-----|
| a) hundreds | 416 | b) tens | 368 |
| c) tens | 364 | d) hundreds | 456 |
| e) ones | 206 | f) ones | 634 |

g) hundreds	742	h) hundred	543
i) tens	221	j) ones	100
k) ones	169	l) tens	684

Answers to Exercise Five

- | | | |
|-------------|-------------|-------------|
| a) <u>4</u> | b) <u>6</u> | c) <u>6</u> |
| d) <u>4</u> | e) <u>6</u> | f) <u>4</u> |
| g) <u>7</u> | h) <u>5</u> | i) <u>2</u> |
| j) <u>0</u> | k) <u>9</u> | l) <u>8</u> |

Emotions Check

How are you feeling? Are your palms moist? How is your breathing? Take control. Be the boss. If you are feeling anxious, practice your breathing exercise.

Remember: breathe in slowly to the count of four, hold it for the count of four and breathe out slowly to the count of four.

Reading and Writing Numerals

You know that the **digits** are 0 1 2 3 4 5 6 7 8 9 and that digits are arranged in different places so we can count larger amounts than our ten fingers!

When we use **digits** we call what we write the **numeral**.

328 is a numeral

46 is a numeral

3 is a numeral

We use numerals to represent **numbers**.

If we think about language instead of mathematics it will be clearer.

Letters are used to make **words**. We respond to the **meaning** of words.

Digits are the “letters” of math.

Numerals are the “words” of math.

Numbers are the “meaning” of math.

Now you know the place value of digits up to three places. Next you will learn to read and write numerals and number words. Some of the words to read and spell may be new to you.

The numerals from 1 to 12 have special words. These are

0	zero	7	seven
1	one	8	eight
2	two	9	nine
3	three	10	ten
4	four	11	eleven
5	five	12	twelve
6	six		

The number names for numerals from 13 to 19 are made up of two parts. The first part tells us **how many units**. The second part (“teen”) tells us there is also **1 ten**.

13	thirteen	three units and 1 ten
14	fourteen	four units and 1 ten
15	fifteen	five units and 1 ten
16	sixteen	six units and 1 ten
17	seventeen	seven units and 1 ten
18	eighteen	eight units and 1 ten
19	nineteen	nine units and 1 ten

Exercise Six

Write the word name for each number. Try not to look at the list. Check your work using the answer key at the end of the exercise.

- | | |
|-------------|-------------|
| a) 8 _____ | b) 16 _____ |
| c) 7 _____ | d) 15 _____ |
| e) 5 _____ | f) 11 _____ |
| g) 9 _____ | h) 18 _____ |
| i) 6 _____ | j) 17 _____ |
| k) 4 _____ | l) 14 _____ |
| m) 12 _____ | n) 13 _____ |
| o) 19 _____ | p) 3 _____ |

Answers to Exercise Six

- | | | |
|--------------|-------------|-------------|
| a) eight | b) sixteen | c) seven |
| d) fifteen | e) five | f) eleven |
| g) nine | h) eighteen | i) six |
| j) seventeen | k) four | l) fourteen |
| m) twelve | n) thirteen | o) nineteen |
| p) three | | |

The word names for the numbers 20 to 90 are also made up of two parts. The first part tells us **how many groups of tens**. The second part (“ty”) tells us we are counting **groups of tens** and not something else. The “-ty” may have come from a shortening of the word “ten”.

20	twenty	two tens
30	thirty	three tens
40	forty	four tens
50	fifty	five tens
60	sixty	six tens
70	seventy	seven tens
80	eighty	eight tens
90	ninety	nine tens

The names for the numbers **between** groups of tens also follow a pattern. The first number tells us how many tens. The second number tells us how many ones.

	Tens	Ones		Tens	Ones		Tens	Ones
20	twenty		30	thirty		40	forty	
21	twenty- one		31	thirty- one		41	forty- one	
22	twenty- two		32	thirty- two		42	forty- two	
23	twenty- three		33	thirty- three		43	forty- three	
24	twenty- four		34	thirty- four		44	forty- four	
25	twenty- five		35	thirty- five		45	forty- five	
26	twenty- six		36	thirty- six		46	forty- six	
27	twenty- seven		37	thirty- seven		47	forty- seven	
28	twenty- eight		38	thirty- eight		48	forty- eight	
29	twenty- nine		39	thirty- nine		49	forty- nine	

The written names for numbers that have tens and ones are written with a hyphen (-) between them. This pattern with the hyphen continues up to ninety-nine (99).

Exercise Seven

Write the word names for these numbers. Check your work using the answer key at the end of the exercise.

- a) 24 twenty-four b) 35 thirty-five
- c) 83 _____ d) 46 _____
- e) 59 _____ f) 20 _____
- g) 71 _____ h) 94 _____
- i) 62 _____ j) 53 _____

Answers to Exercise Seven

- | | | |
|-----------------|----------------|----------------|
| c) eighty-three | d) forty-six | e) fifty-nine |
| f) twenty | g) seventy-one | h) ninety-four |
| i) sixty-two | j) fifty-three | |

Exercise Eight

Without looking back, write the word names for these numbers. Check your work using the answer key at the end of the exercise.

- a) 44 forty-four b) 97 _____
- c) 71 _____ d) 86 _____
- e) 53 _____ f) 25 _____
- g) 15 _____ h) 38 _____

Answers to Exercise Eight

- | | | |
|-----------------|----------------|---------------|
| b) ninety-seven | c) seventy-one | d) eighty-six |
| e) fifty-three | f) twenty-five | g) fifteen |
| h) thirty-eight | | |

Exercise Nine

Write the numerals for these word names. Check your work using the answer key at the end of the exercise.

- | | | | |
|----------------|-----------|----------------|-----------|
| a) ninety-nine | <u>99</u> | b) sixty-seven | <u>67</u> |
| c) eighty-one | _____ | d) eighteen | _____ |
| e) twenty-six | _____ | f) thirteen | _____ |
| g) thirty | _____ | h) forty-three | _____ |
| i) sixteen | _____ | j) twenty | _____ |

Answers to Exercise Nine

- | | | |
|-------|-------|-------|
| c) 81 | d) 18 | e) 26 |
| f) 13 | g) 30 | h) 43 |
| i) 16 | j) 20 | |

When we write hundreds in words, we need two words. The first word tells us **how many** hundreds. The second word tells us we are counting hundreds.

200 **two hundred**

You now know how to write numbers in words up to 999.

367 is made of	3 hundreds	6 tens	7 ones
Each is written:	three hundred	sixty	seven
Put the parts together:	three hundred sixty-seven		

Remember:

- hyphen (-) between the tens and units
- no hyphen anywhere else
- no “s” on the hundred
- no „and” between the hundreds place and the tens place

Here is another example. Watch out for the empty space!

504 is made of	5 hundreds	0 tens	4 ones
Each is written:	five hundred		four
Put the parts together:	five hundred four		

Here is another example. Watch out for the empty space!

890 is made of	8 hundreds	9 tens	0 ones
Each is written:	eight hundred	ninety	
Put the parts together:	eight hundred ninety		

Here is another example. Watch out for the empty spaces!

100 is made of	1 hundreds	0 tens	0 ones
Each is written:	one hundred		
Put the parts together:	one hundred		

Remember: empty spaces are not written in words.

Exercise Ten

Write the word names for these numerals. Check your work using the answer key at the end of the exercise.

a)

623 is made of			
Each is written:			
Put the parts together:			

b)

364 is made of			
Each is written:			
Put the parts together:			

c)

213 is made of			
Each is written:			
Put the parts together:			

d)

405 is made of			
Each is written:			
Put the parts together:			

e)

820 is made of			
Each is written:			
Put the parts together:			

f) 704 _____

g) 470 _____

h) 993 _____

i) 100 _____

j) 972 _____

Answers to Exercise Ten

a)

623 is made of	6 hundreds	2 tens	3 ones
Each is written:	six hundred	twenty	three
Put the parts together:	six hundred twenty-three		

b)

364 is made of	3 hundreds	6 tens	4 ones
Each is written:	three hundred	sixty	four
Put the parts together:	three hundred sixty-four		

c)

213 is made of	2 hundreds	1 ten	3 ones
Each is written:	two hundred	thirteen	
Put the parts together:	two hundred thirteen		

d)

405 is made of	4 hundreds	0 tens	5 ones
Each is written:	four hundred		five
Put the parts together:	four hundred five		

e)

820 is made of	8 hundreds	2 tens	0 ones
Each is written:	eight hundred	twenty	
Put the parts together:	eight hundred twenty		

f) seven hundred four

g) four hundred seventy

h) nine hundred ninety-three

i) one hundred

j) nine hundred seventy-two

A. Write the place value for the underlined digit.**6 marks**

- a) 765 _____ b) 903 _____
c) 479 _____ d) 185 _____
e) 732 _____ f) 397 _____

B. Write the word names for these numerals.**6 marks**

- a) 79 _____
b) 492 _____
c) 378 _____
d) 820 _____
e) 405 _____
f) 583 _____

C. Write the numerals for these word names.**5 marks**

- a) five hundred forty-seven _____
b) three hundred eighty _____
c) two hundred seventy-five _____
d) four hundred sixteen _____
e) nine hundred twenty-three _____

Answers to Topic C Self-test

A.

- | | | |
|---------|---------|-------------|
| a) tens | b) tens | c) hundreds |
| d) ones | e) ones | f) hundreds |

B.

- | | |
|--------------------------------|------------------------------|
| a) seventy-nine | b) four hundred ninety-two |
| c) three hundred seventy-eight | d) eight hundred twenty |
| e) four hundred five | f) five hundred eighty-three |

C.

- | | | |
|--------|--------|--------|
| a) 547 | b) 380 | c) 275 |
| d) 416 | e) 923 | |

Topic D: Ordering Numerals

We arrange **numerals** in order from smallest to largest. Sorting numbered papers such as order forms, arranging items by the date and comparing prices are some of the ways you use this skill.

Look at two numerals and tell which one is larger. How do you do this?

Exercise One

Draw a box around the larger numeral in each pair.

- a) 43 48 b) 27 21 c) 64 63
- d) 24 35 e) 92 89 f) 72 81

Answers to Exercise One

- b) 27 c) 64 d) 35 e) 92 f) 81

To compare numerals, look at the place with the largest value.

Example A: Compare 63 and 59

- Look at the tens place.
63 has a 6 in the tens place.
59 has a 5 in the tens place.
63 is larger than 59.

Example B: Compare 496 and 476.

- Look at the hundreds – both have 4's.
- Look at the tens place.
496 has a 9 in the tens place.
476 has a 7 in the tens place.
496 is larger than 476.

Note: Numerals with one digit are always less than numerals with two digits. Numerals with two digits are always less than numerals with three digits, and so on.

9 is less than 15
87 is less than 107
999 is less than 1 001

Exercise Two

Draw a box around the larger numeral in each pair. Check your work using the answer key at the end of the exercise.

a) 36

46

b) 580

59

c) 87

67

d) 716

116

e) 429

449

f) 289

283

g) 229

329

h) 230

210

i) 51

159

j) 836

935

k) 36

37

l) 461

468

Answers to Exercise Two

b) 580

c) 87

d) 716

e) 449

f) 289

g) 329

h) 230

i) 159

j) 935

k) 37

l) 468

Exercise Three

Draw a box around the larger numeral in each pair. Check your work using the answer key at the end of the exercise.

a) 148

151

b) 129

132

c) 34

37

d) 325

236

e) 118

13

f) 489

423

g) 471

422

h) 316

322

i) 876

319

Exercise Three – Answer Key

b) 132

c) 37

d) 325

e) 118

f) 489

g) 471

h) 322

i) 876

Now use the same ideas to arrange more than two numerals in order.

For example, to arrange 6, 616, 1, 66, 666, 61, and 16 in order from **smallest** to **largest**, use the following method:

- First, sort the numerals with the same number of digits into groups.

6, 1 66, 16, 61 and 616, 666

- The group of one digit numerals contains 6 and 1. As 1 is smaller than 6, the list starts with 1, then 6.
- The group of two-digit numerals contains 66, 61, and 16. Use your skills in ordering numerals to see that 16 is smallest, then 61, and 66 is the largest of this group. The list now reads, 1, 6, 16, 61, 66.
- Finally, look at the three-digit numerals, 616 and 666. As 616 is smaller than 666, it will come first. The list now reads: 1, 6, 16, 61, 66, 616, 666.

Exercise Four

Arrange these numbers in order from smallest to largest.
Check your work using the answer key at the end of the exercise.

a) 323 32 332 33 3 322 2

b) 44 7 474 47 744 74 77

c) 123 135 152 125

d) 472 427 452 475

Answers to Exercise Four

a) 2, 3, 32, 33, 322, 323, 332

b) 7, 44, 47, 74, 77, 474, 744

c) 123, 125, 135, 152

d) 427, 452, 472, 475

Greater Than, Less Than, Equals

The sign $<$ means “is less than” (smaller than).

The sign $>$ means “is greater than” (bigger than).

The **greater than** and **less than** signs always point to the smaller number. That is, the point or the tip of the sign is close to the small number.

$5 < 12$ means 5 is less than 12

$6 > 3$ means 6 is greater than 3

The sign $=$ means “**equals**” and is used when two amounts are the same.

Exercise Five

Write $<$, $>$, or $=$ in each blank as needed. Check your work using the answer key at the end of the exercise.

a) 3 _____ $<$ _____ 5

b) 8 _____ $>$ _____ 7

c) 12 _____ 9

d) 28 _____ 28

e) 48 _____ 84

f) 376 _____ 376

g) 520 _____ 530

h) 582 _____ 521

i) 674 _____ 296

j) 214 _____ 251

k) 879 _____ 900

l) 784 _____ 784

Answers to Exercise Five

c) $>$

d) $=$

e) $<$

f) $=$

g) $<$

h) $>$

i) $>$

j) $<$

k) $<$

l) $=$

Topic D: Self-Test

Mark /12

Aim 10/12

A. Box the larger number of each pair.

6 marks

- a) 978 789 b) 566 556
c) 120 142 d) 701 710
e) 430 403 f) 879 987

B. Arrange these numerals in order from smallest to largest.

2 marks

- a) 75 754 475 47 747 574 775
-

- b) 18 237 429 824 37 994 112
-

C. Write $>$, $<$, or $=$ in each blank to make a true statement.

4 marks

- a) 678 _____ 768 b) 102 _____ 100
c) 463 _____ 846 d) 101 _____ 101

Answers to Topic D Self-Test

- A. a) 978 b) 566 c) 142
 d) 710 e) 430 f) 987

- B. a) $<$ b) $>$ c) $<$ d) $=$

- C. a) 47, 75, 475, 574, 747, 754, 775

- b) 18, 37, 112, 237, 429, 824, 994

Topic E: Rounding Numbers

We use numbers a lot in our everyday lives. List some of the ways you use numbers.

You may have written money, shopping, time, and counting as part of your answer.

Think about time. Let's say it takes eight minutes to walk to the bus. If someone asks you how long it takes, you will probably say, "About ten minutes."

If you buy a sweater that cost \$29, you may say, "Oh, it was around thirty dollars."

How far is it from Vancouver to Prince George? The map says 796 km, but we would probably say, "About 800 kilometres."

You have just read examples of **rounding numbers**.

We round numbers for many reasons:

- We may not know the exact number.
- The exact number may not be important for what we are doing.
- We may need a **quick way to figure** something out.

When you are rounding numbers, use zeros to hold the places at the end of the number.

Work through the following examples and exercises carefully. **Rounding is an important skill.**

Rounding to the Nearest Ten

A number rounded to the nearest ten will have a zero in the ones place. The number will end with 0, 10, 20, 30, 40, 50, 60, 70, 80, or 90.

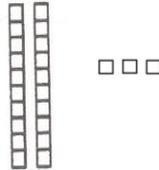
When rounding to the nearest 10, we are looking for the closest group of 10.

Example: 20, 23 and 30.

20



23



30



Is 23 closer to 20 or 30? It is closest to **20**.

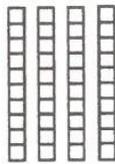
Which gives a better estimate of 23.....2 tens or 3 tens. **2 tens**

If we round 23 to the nearest ten, the result would be **20**.

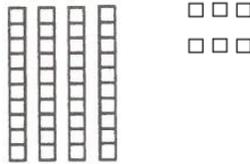
Remember: The rounded number has a zero in the ones place.

Example: 40, 46 and 50

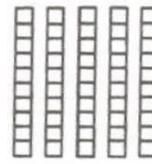
40



46



50

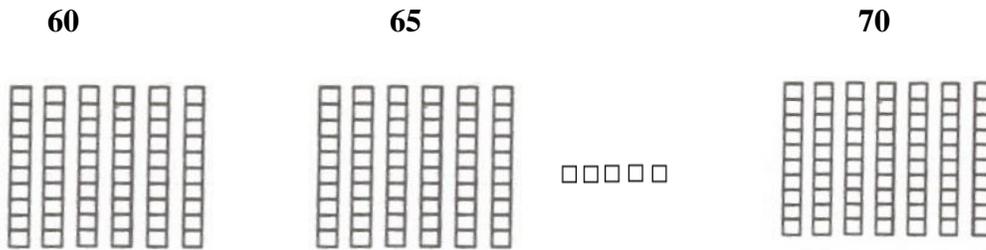


Is 46 closer to 40 or 50? it is closest to **50**.

Which gives a better estimate of 46.....4 tens or 5 tens? **5 tens**

If we round 46 to the nearest ten, the result would be **50**.

Example: 60, 65 and 70



Is 65 closer to 60 or 70? It is closer to **70**.

Which gives a better estimate of 65..... 6 tens or 7 tens? **7 tens**

When we have a number which ends in 5, we always round up to the next ten. If we round 65 to the nearest 10, the result would be **70**.

Example: Round 32 to the nearest 10.

32 is between 3 tens and 4 tens.

32 is closest to 3 tens.

Rounded number is 30.

Exercise One

Round each number to the nearest 10. Check your work using the answer key at the end of the exercise.

a) **47** is between _____ tens and _____ tens.

47 is closest to _____ tens.

Rounded number is _____.

b) **81** is between _____ tens and _____ tens.

81 is closest to _____ tens.

Rounded number is _____.

c) **14** is between _____ tens and _____ tens.

14 is closest to _____ tens.

Rounded number is _____.

- d) **26** is between _____ tens and _____ tens.
26 is closest to _____ tens.
Rounded number is _____.
- e) **98** is between _____ tens and _____ tens.
98 is closest to _____ tens.
Rounded number is _____.
- f) **57** is between _____ tens and _____ tens.
57 is closest to _____ tens.
Rounded number is _____.
- g) **73** is between _____ tens and _____ tens.
73 is closest to _____ tens.
Rounded number is _____.
- h) **2** is between _____ tens and _____ tens.
2 is closest to _____ tens.
Rounded number is _____.
- i) **39** is between _____ tens and _____ tens.
39 is closest to _____ tens.
Rounded number is _____.
- j) **65** is between _____ tens and _____ tens.
65 is closest to _____ tens.
Rounded number is _____.
- k) **18** is between _____ tens and _____ tens.
18 is closest to _____ tens.
Rounded number is _____.

Answers to Exercise One

a) 4 tens, 5 tens
5 ten
50

b) 8 tens, 9 tens
8 tens
80

c) 1 ten, 2 tens
1 ten
10

d) 2 tens, 3 tens
3 tens
30

e) 9 tens, 10 tens
10 tens
100

f) 5 tens, 6 tens
6 tens
60

g) 7 tens, 8 tens
7 tens
70

h) 0 tens, 1 ten
0 tens
0

i) 3 tens, 4 tens
4 tens
40

j) 6 tens, 7 tens
7 tens
70

k) 1 ten, 2 tens
2 tens
20

Now look at a shorter method to round to the nearest ten.

When **rounding to the nearest ten**, do this:

Step 1: Underline the tens digit.

83

Step 2: Look at the digit following in the ones place.

↓
83

Step 3: If the digit in the ones place is less than 5,

- write a 0 in the ones place.
- leave the tens digit as it is.

↓
42 rounds to 40 (42 is nearer to 40 than to 50)

↓
14 rounds to 10

↓
83 rounds to 80

Step 4: If the digit in the ones place is 5 or more,

- write a 0 in the ones place.
- add one more ten to the tens place.

↓
36 rounds to 40 (36 is nearer to 40 than to 30)

↓
25 rounds to 30

↓
98 rounds to 100 (one more ten than nine tens is ten tens)

Note: If you are rounding to the nearest ten, single digits are rounded like this:

0, 1, 2, 3, 4 all round to **0**.

5, 6, 7, 8, 9 all round to **10**.

When you round a number, use the sign that means “approximately equal” \approx

Exercise Two

Round each number to the nearest ten. Check your work using the answer key at the end of the exercise.

a) $22 \approx \underline{20}$

b) $86 \approx \underline{90}$

c) $31 \approx \underline{\hspace{2cm}}$

d) $96 \approx \underline{\hspace{2cm}}$

e) $84 \approx \underline{\hspace{2cm}}$

f) $55 \approx \underline{\hspace{2cm}}$

g) $8 \approx \underline{\hspace{2cm}}$

h) $2 \approx \underline{\hspace{2cm}}$

i) $63 \approx \underline{\hspace{2cm}}$

j) $49 \approx \underline{\hspace{2cm}}$

k) $25 \approx \underline{\hspace{2cm}}$

l) $71 \approx \underline{\hspace{2cm}}$

m) $38 \approx \underline{\hspace{2cm}}$

n) $51 \approx \underline{\hspace{2cm}}$

o) $88 \approx \underline{\hspace{2cm}}$

Answers to Exercise Two

c) 30

d) 100

e) 80

f) 60

g) 10

h) 0

i) 60

j) 50

k) 30

l) 70

m) 40

n) 50

o) 90

Numbers of any size can be rounded to the nearest ten using the method you have just learned.

$$\begin{array}{c} \downarrow \\ 238 \approx 240 \end{array}$$

$$\begin{array}{c} \downarrow \\ 883 \approx 880 \end{array}$$

$$\begin{array}{c} \downarrow \\ 297 \approx 300 \end{array}$$

Exercise Three

Round each number to the nearest ten. Check your work using the answer key at the end of the exercise.

a) $424 \approx$ _____ b) $867 \approx$ _____ c) $499 \approx$ _____

d) $132 \approx$ _____ e) $278 \approx$ _____ f) $617 \approx$ _____

g) $208 \approx$ _____ h) $851 \approx$ _____ i) $124 \approx$ _____

j) $576 \approx$ _____ k) $315 \approx$ _____ l) $742 \approx$ _____

m) $397 \approx$ _____ n) $952 \approx$ _____ o) $639 \approx$ _____

Answers to Exercise Three

- | | | |
|--------|--------|--------|
| a) 420 | b) 870 | c) 500 |
| d) 130 | e) 280 | f) 620 |
| g) 210 | h) 850 | i) 120 |
| j) 580 | k) 320 | l) 740 |
| m) 400 | n) 950 | o) 640 |

Exercise Four

For each problem, round the numbers to the nearest ten.
Check your work using the answer key at the end of the exercise.

Example: Mei Ling has just moved into a new apartment. She bought the following items. Round each amount to the nearest ten.

Item	Cost	Rounded to nearest ten
Towels	\$14	\$10
Dishes	\$32	\$30
Saucepan	\$43	\$40
Microwave	\$109	\$110
Carving Knife	\$18	\$20

- a) Akkul walked 12 kilometres on Monday, 26 kilometres on Tuesday and 6 kilometres on Wednesday. Round each number to the nearest ten.

Day	Number	Rounded Number
Monday	12	
Tuesday	26	
Wednesday	6	

- b) Werner is a keen bird watcher. On Monday, he saw 57 birds, on Tuesday he saw 124 birds, on Wednesday he saw 31 birds and on Thursday he saw 75 birds. Round each number to the nearest ten.

Day	Number	Rounded Number
Monday		
Tuesday		
Wednesday		
Thursday		

- c) Jamir drove 678 kilometres. 493 kilometres, 387 kilometres and 914 kilometres in one week. Round each mileage to the nearest ten.

Day	Kilometres	Rounded Number
#1		
#2		
#3		
#4		

- d) Koho Industries canned 281 cans of salmon last week and 392 cans of salmon this week. They plan to can 438 cans of salmon next. Round each number of cans to the nearest ten.

Week	Cans	Rounded Number
Last week		
This week		
Next week		

- e) During one week at the movie theatre there were 423 people on Monday, 328 people on Tuesday, 148 people on Wednesday and 523 people on Thursday. Round each number to the nearest ten.

Day	People	Rounded Number
Monday		
Tuesday		
Wednesday		
Thursday		

Answers to Exercise Four

a) 10, 30, 10

b) 60, 120, 30, 80

c) 680, 490, 390, 910

d) 280, 390, 440

e) 420, 330, 150, 520

A. Round your answer to the nearest ten.**8 marks**

- a) $47 \approx$ _____ b) $123 \approx$ _____
c) $4 \approx$ _____ d) $945 \approx$ _____
e) $329 \approx$ _____ f) $481 \approx$ _____
g) $865 \approx$ _____ h) $916 \approx$ _____

B. Round each number to the nearest ten.**4 marks**

- a) Mary scored 78, 91, 79, 67 and 102 on her arithmetic test. Round her scores to the nearest ten.

Score	Rounded Score

Answers to Topic E Self-Test**A.**

- a) 50 b) 120 c) 0
d) 950 e) 330 f) 480
g) 870 h) 920

B.

- a) 80, 90, 80, 70, 100

Topic F: More Counting

Practice your counting by filling in the counting chart. Have your instructor check your chart when you are done.

0	1	2	3	4	5	6	7	8	9
10									

If you had a pile of pennies or loonies, you would count by ones in order to find out how much money you have.

Use your counting chart and start at 1. Write down every second number.

0	1	3	5						

The numbers above are called **odd** numbers.

Use your counting chart and starting at 0. Write down every second number.

0	2	4	6						

The numbers above are called the **even** numbers. If you had a pile of toonies, you could count by two's to find out how much money you have.

Use your counting chart and start at 0. Count five and write down that number.

0	5	10							

If you had a pile of nickels or five dollar bills and wanted to know how much money you have, you would count by 5's.

Use your counting chart and starting at 0. Count ten and write down that number.

0	10	20							
----------	-----------	-----------	--	--	--	--	--	--	--

If you had a pile of dimes or ten dollar bills and wanted to know how much money you have, you would count by 10's.

Exercise One

Count how much money you have. Check your work using the answer key at the end of the exercise.

Example:



5



10



15

How many nickels? 3

How much money do you have? 15 cents

a)



How many twonies do you have? _____

How much money do you have? _____ dollars

b)



How many dimes do you have? _____

How much money do you have? _____ cents

c)



How many nickels do you have? _____

How much money do you have? _____ cents

d)



How many dimes do you have? _____

How much money do you have? _____ cents

e)



How many nickels do you have? _____

How much money do you have? _____ cents

f)



How many twonies do you have? _____

How much money do you have? _____ dollars

g)



How much money do you have? _____ cents

h)



How much money do you have? _____ dollars

i)



How much money do you have? _____ cents

Answers to Exercise One

- | | | |
|----------------------|-------------------------|------------------------|
| a) 4 twonies, \$8 | b) 7 dimes, 70 cents | c) 9 nickels, 45 cents |
| d) 4 dimes, 40 cents | e) 10 nickels, 50 cents | f) 3 twonies, \$26 |
| g) 90 cents | h) \$36 | i) 70 cents |

Topic F: Self-Test

Mark /16

Aim 13/16

A. Write the first 10 odd numbers starting with 1.

5 marks

B. Write the first 10 even numbers starting at 2.

5 marks

C. How much money do you have?

6 marks
(2 marks each)

i)



How much money do you have? _____ cents

ii)



How much money do you have? _____ dollars

iii)



How much money do you have? _____ cents

Answers to Topic F Self-Test

A. 1, 3, 5, 7, 9, 11, 13, 15, 17, 19

B. 2, 4, 6, 8, 10, 12, 14, 16, 18, 20

C. i) 75 cents ii) 38 dollars iii) 80 cents

Emotions Check

How are you feeling? Are your palms moist? How is your breathing?
Take control. Be the boss. If you are feeling anxious, practice your
breathing exercise.

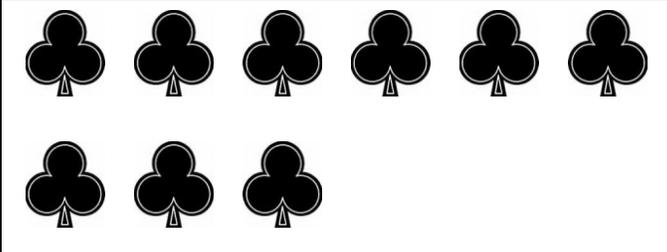
Remember: breathe in slowly to the count of four, hold it for the count of
four and breathe out slowly to the count of four.

Unit 1 Review - Number Sense

You will now practice all the skills you learned in Unit 1. Check your work using the answer key at the end of the review.

A. Count the number of things in each picture. Write the number and word name.

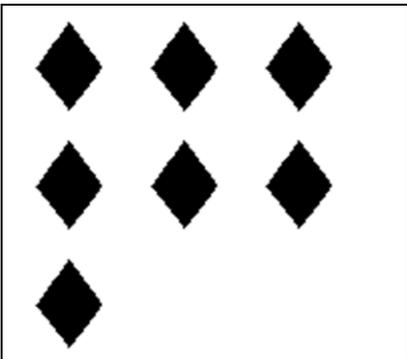
a)



Numeral:

Word Name:

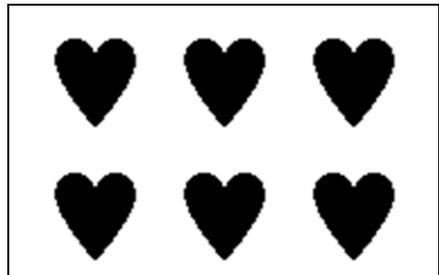
b)



Numeral:

Word Name:

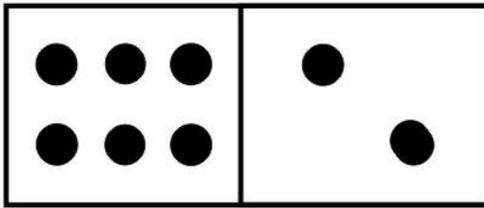
c)



Numeral:

Word Name:

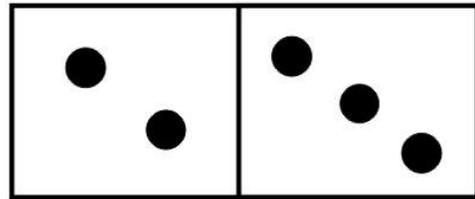
d)



Numeral:

Word Name:

e)



Numeral:

Word Name:

B. Fill in the blanks to make each sentence true. Draw a picture for questions b and e.

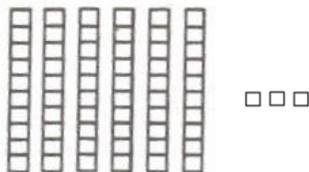
a) 46 means ____ tens and ____ ones.

b) 25 means ____ tens and ____ ones.

Draw your picture below.



c)

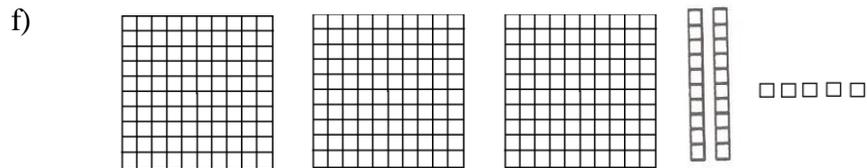
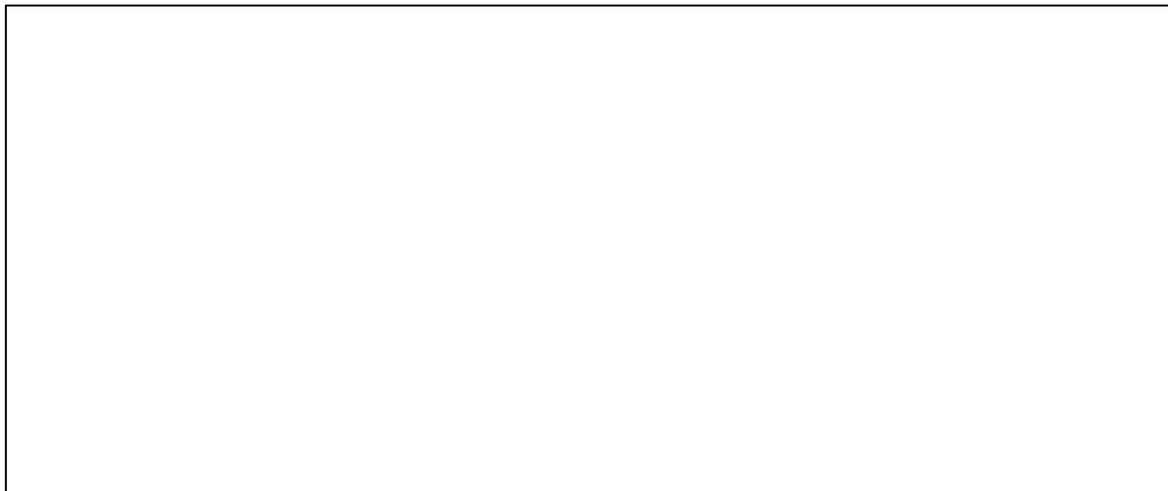


_____ means _____ tens and _____ ones

d) 138 = _____ hundreds, _____ tens, _____ ones.

e) 231 = _____ hundreds, _____ tens, _____ ones.

Draw your picture below.



_____ hundreds _____ tens _____ ones = _____

C. Write the place value name (ones, tens, hundreds) for each underlined digit.

a) 821 _____ b) 294 _____

c) 638 _____ d) 417 _____

e) 346 _____ f) 573 _____

D. Underline the digit for the place value named.

- | | | | |
|-------------|-----|-------------|-----|
| a) hundreds | 164 | b) tens | 892 |
| c) tens | 250 | d) hundreds | 371 |
| e) ones | 485 | f) ones | 743 |

E. Write the word names for the numbers.

- | | |
|--------------|--------------|
| a) 73 _____ | b) 14 _____ |
| c) 5 _____ | d) 39 _____ |
| e) 52 _____ | f) 496 _____ |
| g) 803 _____ | h) 640 _____ |

F. Write the numerals for these word names.

- | | |
|------------------------------|-----------------------------------|
| a) forty-seven _____ | b) nineteen _____ |
| c) sixty-five _____ | d) thirty-eight _____ |
| e) twenty-four _____ | f) five hundred thirty-five _____ |
| g) three hundred sixty _____ | h) two hundred four _____ |

G. Arrange these numbers in order from smallest to largest.

- a) 258 32 23 282 345 534
- _____

b) 155 27 635 208 452 335

H. Write $<$, $>$, or $=$ in each blank as needed.

a) 37 _____ 52 b) 4 _____ 0

c) 349 _____ 394 d) 67 _____ 67

e) 86 _____ 68 f) 732 _____ 751

I. Round each number to the nearest ten.

a) $37 \approx$ _____ b) $344 \approx$ _____ c) $68 \approx$ _____

d) $25 \approx$ _____ e) $51 \approx$ _____ f) $876 \approx$ _____

J. How much money do you have?



How much money do you have? _____ cents

b)



How much money do you have? _____ dollars

c)



How much money do you have? _____ cents

K. Word Problems

- a) Hussein's fruit stand sold 114 watermelons, 287 honeydew melons and 345 cantaloupes. Round each number to the nearest ten.

Melon	Number	Rounded Number
Watermelons		
Honeydew Melons		
Cantaloupes		

- b) Yi-Min drove her delivery van 106 kilometres on Saturday, 187 kilometres on Sunday and 285 kilometres on Monday. Round each number to the nearest ten.

Kilometres	Number	Rounded Number
Saturday		
Sunday		
Monday		

Answers to Unit 1 Review

A.

- a) 9, nine b) 7, seven c) 6, six d) 8, eight e) 5, five

B.

- a) 4 tens, 6 ones b) 2 tens, 5 ones c) 63, 6 tens, 3 ones
 d) 1 hundred, 3 tens, 8 ones e) 2 hundreds, 3 tens, 1 one
 f) 3 hundreds, 2 tens 5 ones, 325

C.

- a) hundreds b) tens c) ones d) hundreds
 e) tens f) ones

D.

- a) 164 b) 82 c) 250 d) 371 e) 485 f) 743

E.

- a) seventy-three b) fourteen c) five d) thirty-nine
 e) fifty-two f) four hundred ninety-six g) six hundred forty

F.

- a) 47 b) 19 c) 65 d) 38 e) 24 f) 535
 g) 360 h) 204

G.

- a) 23, 32, 258, 282, 345, 534 b) 27, 155, 208, 335, 452, 635

H.

- a) < b) > c) < d) = e) > f) <

I.

- a) 40 b) 340 c) 70 d) 30 e) 50 f) 880

J.

- a) 70 cents b) 26 dollars c) 90 cents

K. a)

Melon	Number	Rounded Number
Watermelons	114	110
Honeydew Melons	287	290
Cantaloupes	345	350

b)

Day	Kilometres	Rounded Number
Saturday	106	110
Sunday	187	190
Monday	285	290

CONGRATULATIONS!!

Now you have finished Unit 1.

TEST TIME!

Ask your instructor for the Practice Test for this unit.

Once you've done the practice test,
you need to do the unit 1 test.

Again, ask your instructor for this.

Good luck!

Unit 2

Addition

Topic A: Addition

Addition puts amounts together. The answer of addition is called the **sum** or the **total**.

The **plus sign** + means to add.

$$\begin{array}{ccccccc} \diamond & \diamond & \diamond & + & \diamond & \diamond & = & \diamond & \diamond & \diamond & \diamond & \diamond \\ 3 & & & + & 2 & & = & 5 & & & & \end{array}$$

says “three plus two equals five”
or “three and two is five”

The **sum** is 5.

You can count on your fingers to get the answers to addition questions, but counting takes too long.

Addition facts are a tool that you use to do adding questions.

Exercise One

Check out your **addition facts** by doing this exercise as quickly as possible without counting on your fingers. The highest **total** or **sum** (what the numbers add up to) for these number facts is 9. Check your work using the answer key at the end of the exercise. Then, make a list of any addition facts you do not know or which are slow – practice them.

a)
$$\begin{array}{r} 2 \\ +4 \\ \hline 6 \end{array}$$

b)
$$\begin{array}{r} 3 \\ +1 \\ \hline 4 \end{array}$$

c)
$$\begin{array}{r} 1 \\ +2 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 7 \\ +0 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 0 \\ +4 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 1 \\ +4 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 5 \\ +2 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 3 \\ +3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{i)} \quad 2 \\ +0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{j)} \quad 6 \\ +3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{k)} \quad 4 \\ +4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{l)} \quad 3 \\ +0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m)} \quad 5 \\ +3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{n)} \quad 1 \\ +6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{o)} \quad 0 \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{p)} \quad 8 \\ +1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 2 \\ +6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{r)} \quad 1 \\ +0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{s)} \quad 1 \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{t)} \quad 2 \\ +2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 3 \\ +2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 2 \\ +1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 5 \\ +4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 1 \\ +7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{y)} \quad 9 \\ +0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{z)} \quad 5 \\ +1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 0 \\ +3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 4 \\ +1 \\ \hline \end{array}$$

Answers to Exercise One

a) 6	b) 4	c) 3	d) 7	e) 4	f) 5	g) 7
h) 6	i) 2	j) 9	k) 8	l) 3	m) 8	n) 7
o) 5	p) 9	q) 8	r) 1	s) 6	t) 4	u) 5
v) 3	w) 9	x) 8	y) 9	z) 6	aa) 3	bb) 5

Exercise Two

Check out your **addition facts** by doing this exercise as quickly as possible without counting on your fingers. The highest **total** or **sum** (what the numbers add up to) for these number facts is 9. Check your work using the answer key at the end of the exercise. Then, make a list of any addition facts you do not know or which are slow – practice them.

a)
$$\begin{array}{r} 4 \\ +5 \\ \hline 9 \end{array}$$

b)
$$\begin{array}{r} 1 \\ +8 \\ \hline 9 \end{array}$$

c)
$$\begin{array}{r} 8 \\ +0 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 4 \\ +3 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 0 \\ +0 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 2 \\ +3 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 7 \\ +1 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 0 \\ +9 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 4 \\ +2 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 0 \\ +2 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 0 \\ +7 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 1 \\ +1 \\ \hline \end{array}$$

m)
$$\begin{array}{r} 2 \\ +7 \\ \hline \end{array}$$

n)
$$\begin{array}{r} 0 \\ +1 \\ \hline \end{array}$$

o)
$$\begin{array}{r} 6 \\ +2 \\ \hline \end{array}$$

p)
$$\begin{array}{r} 0 \\ +6 \\ \hline \end{array}$$

q)
$$\begin{array}{r} 1 \\ +3 \\ \hline \end{array}$$

r)
$$\begin{array}{r} 3 \\ +5 \\ \hline \end{array}$$

s)
$$\begin{array}{r} 2 \\ +5 \\ \hline \end{array}$$

t)
$$\begin{array}{r} 0 \\ +8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 3 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 4 \\ + 0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 3 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 5 \\ + 0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{y)} \quad 6 \\ + 1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{z)} \quad 6 \\ + 0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 7 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 0 \\ + 3 \\ \hline \end{array}$$

Answers to Exercise Two

a) 9	b) 9	c) 8	d) 7	e) 0	f) 5	g) 8
h) 9	i) 6	j) 2	k) 7	l) 2	m) 9	n) 1
o) 8	p) 6	q) 4	r) 8	s) 7	t) 8	u) 7
v) 4	w) 9	x) 5	y) 7	z) 6	aa) 9	bb) 3

Exercise Three

Check out your **addition facts** by doing this exercise as quickly as possible without counting on your fingers. The highest **total** or **sum** (what the numbers add up to) for these number facts is 9. Check your work using the answer key at the end of the exercise. Then, make a list of any addition facts you do not know or which are slow – practice them.

$$\begin{array}{r} \text{a)} \quad 3 \\ + 6 \\ \hline 9 \end{array}$$

$$\begin{array}{r} \text{b)} \quad 4 \\ + 5 \\ \hline 9 \end{array}$$

$$\begin{array}{r} \text{c)} \quad 4 \\ + 1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d)} \quad 9 \\ + 0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{e)} \quad 2 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{f)} \quad 3 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{g)} \quad 0 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{h)} \quad 5 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{i)} \quad 4 \\ \quad \underline{+0} \end{array}$$

$$\begin{array}{r} \text{j)} \quad 1 \\ \quad \underline{+8} \end{array}$$

$$\begin{array}{r} \text{k)} \quad 2 \\ \quad \underline{+3} \end{array}$$

$$\begin{array}{r} \text{l)} \quad 0 \\ \quad \underline{+5} \end{array}$$

$$\begin{array}{r} \text{m)} \quad 0 \\ \quad \underline{+0} \end{array}$$

$$\begin{array}{r} \text{n)} \quad 1 \\ \quad \underline{+2} \end{array}$$

$$\begin{array}{r} \text{o)} \quad 4 \\ \quad \underline{+3} \end{array}$$

$$\begin{array}{r} \text{p)} \quad 6 \\ \quad \underline{+1} \end{array}$$

$$\begin{array}{r} \text{q)} \quad 6 \\ \quad \underline{+2} \end{array}$$

$$\begin{array}{r} \text{r)} \quad 3 \\ \quad \underline{+2} \end{array}$$

$$\begin{array}{r} \text{s)} \quad 2 \\ \quad \underline{+7} \end{array}$$

$$\begin{array}{r} \text{t)} \quad 0 \\ \quad \underline{+7} \end{array}$$

$$\begin{array}{r} \text{u)} \quad 5 \\ \quad \underline{+4} \end{array}$$

$$\begin{array}{r} \text{v)} \quad 1 \\ \quad \underline{+7} \end{array}$$

$$\begin{array}{r} \text{w)} \quad 5 \\ \quad \underline{+3} \end{array}$$

$$\begin{array}{r} \text{x)} \quad 3 \\ \quad \underline{+3} \end{array}$$

$$\begin{array}{r} \text{y)} \quad 1 \\ \quad \underline{+4} \end{array}$$

$$\begin{array}{r} \text{z)} \quad 2 \\ \quad \underline{+4} \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 0 \\ \quad \underline{+4} \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 1 \\ \quad \underline{+3} \end{array}$$

$$\begin{array}{r} \text{cc)} \quad 1 \\ \quad \underline{+6} \end{array}$$

$$\begin{array}{r} \text{dd)} \quad 0 \\ \quad \underline{+8} \end{array}$$

$$\begin{array}{r} \text{ee)} \quad 8 \\ \quad \underline{+1} \end{array}$$

$$\begin{array}{r} \text{ff)} \quad 3 \\ \quad \underline{+5} \end{array}$$

$$\begin{array}{r} \text{gg)} \quad 3 \\ + 0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{hh)} \quad 6 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{ii)} \quad 3 \\ + 1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{jj)} \quad 7 \\ + 1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{kk)} \quad 2 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{ll)} \quad 4 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{mm)} \quad 2 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{nn)} \quad 3 \\ + 4 \\ \hline \end{array}$$

Answers to Exercise Three

a) 9	b) 9	c) 5	d) 9	e) 4	f) 7	g) 6
h) 7	i) 4	j) 9	k) 5	l) 5	m) 0	n) 3
o) 7	p) 7	q) 8	r) 5	s) 9	t) 7	u) 9
v) 8	w) 8	x) 6	y) 5	z) 6	aa) 4	bb) 4
cc) 7	dd) 8	ee) 9	ff) 8	gg) 3	hh) 9	ii) 4
jj) 8	kk) 8	ll) 8	mm) 7	nn) 7		

Exercise Four

Check out your **addition facts** by doing this exercise as quickly as possible without counting on your fingers. The highest **total** or **sum** (what the numbers add up to) for these number facts is 12. Check your work using the answer key at the end of the exercise. Then, make a list of any addition facts you do not know or which are slow – practice them.

$$\begin{array}{r} \text{a)} \quad 6 \\ + 5 \\ \hline 11 \end{array}$$

$$\begin{array}{r} \text{b)} \quad 8 \\ + 2 \\ \hline 10 \end{array}$$

$$\begin{array}{r} \text{c)} \quad 5 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d)} \quad 5 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} e) \quad 3 \\ +4 \\ \hline \end{array}$$

$$\begin{array}{r} f) \quad 2 \\ +6 \\ \hline \end{array}$$

$$\begin{array}{r} g) \quad 7 \\ +3 \\ \hline \end{array}$$

$$\begin{array}{r} h) \quad 3 \\ +9 \\ \hline \end{array}$$

$$\begin{array}{r} i) \quad 9 \\ +3 \\ \hline \end{array}$$

$$\begin{array}{r} j) \quad 8 \\ +1 \\ \hline \end{array}$$

$$\begin{array}{r} k) \quad 4 \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} l) \quad 1 \\ +9 \\ \hline \end{array}$$

$$\begin{array}{r} m) \quad 2 \\ +7 \\ \hline \end{array}$$

$$\begin{array}{r} n) \quad 3 \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} o) \quad 6 \\ +6 \\ \hline \end{array}$$

$$\begin{array}{r} p) \quad 5 \\ +6 \\ \hline \end{array}$$

$$\begin{array}{r} q) \quad 4 \\ +6 \\ \hline \end{array}$$

$$\begin{array}{r} r) \quad 5 \\ +8 \\ \hline \end{array}$$

$$\begin{array}{r} s) \quad 8 \\ +4 \\ \hline \end{array}$$

$$\begin{array}{r} t) \quad 5 \\ +2 \\ \hline \end{array}$$

$$\begin{array}{r} u) \quad 3 \\ +7 \\ \hline \end{array}$$

$$\begin{array}{r} v) \quad 2 \\ +8 \\ \hline \end{array}$$

$$\begin{array}{r} w) \quad 2 \\ +9 \\ \hline \end{array}$$

$$\begin{array}{r} x) \quad 7 \\ +1 \\ \hline \end{array}$$

Answers to Exercise Four

a) 11	b) 10	c) 8	d) 12	e) 7	f) 8	g) 10
h) 12	i) 12	j) 9	k) 9	l) 10	m) 9	n) 8
o) 12	p) 11	q) 10	r) 11	s) 12	t) 7	u) 10
v) 10	w) 11	x) 8				

Exercise Five

Check out your **addition facts** by doing this exercise as quickly as possible without counting. The highest **total** or **sum** (what the numbers add up to) for these number facts is 12. Check your work using the answer key at the end of the exercise. Then, make a list of any addition facts you do not know or which are slow – practice them.

a)
$$\begin{array}{r} 9 \\ +2 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 6 \\ +4 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 4 \\ +7 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 2 \\ +5 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 8 \\ +3 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 7 \\ +4 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 6 \\ +3 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 5 \\ +5 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 9 \\ +1 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 7 \\ +5 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 4 \\ +8 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 6 \\ +2 \\ \hline \end{array}$$

m)
$$\begin{array}{r} 7 \\ +2 \\ \hline \end{array}$$

n)
$$\begin{array}{r} 1 \\ +7 \\ \hline \end{array}$$

o)
$$\begin{array}{r} 3 \\ +6 \\ \hline \end{array}$$

p)
$$\begin{array}{r} 5 \\ +4 \\ \hline \end{array}$$

q)
$$\begin{array}{r} 4 \\ +7 \\ \hline \end{array}$$

r)
$$\begin{array}{r} 7 \\ +6 \\ \hline \end{array}$$

s)
$$\begin{array}{r} 9 \\ +2 \\ \hline \end{array}$$

t)
$$\begin{array}{r} 4 \\ +8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 6 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 3 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 8 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 4 \\ + 5 \\ \hline \end{array}$$

Answers to Exercise Five

a) 11	b) 10	c) 11	d) 7	e) 11	f) 11	g) 9
h) 10	i) 10	j) 12	k) 12	l) 8	m) 9	n) 8
o) 9	p) 9	q) 11	r) 13	s) 11	t) 12	u) 12
v) 9	w) 10	x) 9				

Exercise Six

Check out your **addition facts** by doing this exercise as quickly as possible without counting. The highest **total** or **sum** (what the numbers add up to) for these number facts is 12. Check your work using the answer key at the end of the exercise. Then, make a list of any addition facts you do not know or which are slow – practice them.

$$\begin{array}{r} \text{a)} \quad 3 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b)} \quad 5 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c)} \quad 4 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d)} \quad 4 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{e)} \quad 6 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{f)} \quad 2 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{g)} \quad 9 \\ + 1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{h)} \quad 7 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{i)} \quad 3 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{j)} \quad 5 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{k)} \quad 6 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{l)} \quad 2 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m)} \quad 4 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{n)} \quad 3 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{o)} \quad 3 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{p)} \quad 5 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 8 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{r)} \quad 8 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{s)} \quad 1 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{t)} \quad 6 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 2 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 5 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 9 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 2 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{y)} \quad 3 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{z)} \quad 6 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 6 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 7 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{cc)} \quad 3 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{dd)} \quad 6 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{ee)} \quad 7 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{ff)} \quad 5 \\ + 5 \\ \hline \end{array}$$

Answers to Exercise Six

a) 12	b) 8	c) 10	d) 7	e) 11	f) 10	g) 10
h) 12	i) 11	j) 7	k) 12	l) 11	m) 10	n) 12
o) 10	p) 12	q) 11	r) 12	s) 10	t) 8	u) 11
v) 11	w) 12	x) 8	y) 8	z) 10	aa) 11	bb) 10
cc) 7	dd) 9	ee) 11	ff) 10			

Need more practice? Practice your addition facts using a set of dice.
Roll the dice and add the amounts on the dice.

Exercise Seven

Check out your **addition facts** by doing this exercise as quickly as possible without counting. The highest **total** or **sum** (what the numbers add up to) for these number facts is 20. Check your work using the answer key at the end of the exercise. Then, make a list of any addition facts you do not know or which are slow – practice them.

a)
$$\begin{array}{r} 7 \\ +6 \\ \hline 13 \end{array}$$

b)
$$\begin{array}{r} 5 \\ +9 \\ \hline 14 \end{array}$$

c)
$$\begin{array}{r} 10 \\ +3 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 5 \\ +7 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 7 \\ +9 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 10 \\ +9 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 8 \\ +7 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 6 \\ +4 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 5 \\ +10 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 8 \\ +9 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 8 \\ +2 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 10 \\ +6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m)} \quad 7 \\ +4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{n)} \quad 6 \\ +10 \\ \hline \end{array}$$

$$\begin{array}{r} \text{o)} \quad 6 \\ +7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{p)} \quad 10 \\ +4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 9 \\ +8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{r)} \quad 2 \\ +10 \\ \hline \end{array}$$

$$\begin{array}{r} \text{s)} \quad 9 \\ +7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{t)} \quad 5 \\ +8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 10 \\ +2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 5 \\ +6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 8 \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 4 \\ +10 \\ \hline \end{array}$$

$$\begin{array}{r} \text{y)} \quad 9 \\ +6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{z)} \quad 8 \\ +4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 9 \\ +10 \\ \hline \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 9 \\ +4 \\ \hline \end{array}$$

Answers to Exercise Seven

a) 13	b) 14	c) 13	d) 12	e) 16	f) 19	g) 15
h) 10	i) 15	j) 17	k) 10	l) 16	m) 11	n) 16
o) 13	p) 14	q) 17	r) 12	s) 16	t) 13	u) 12
v) 11	w) 13	x) 14	y) 15	z) 12	aa) 19	bb) 13

Exercise Eight

Check out your **addition facts** by doing this exercise as quickly as possible without counting. The highest **total** or **sum** (what the numbers add up to) for these number facts is 20. The highest **total** or **sum** (what the numbers add up to) for these number facts is 20. Then, make a list of any addition facts you do not know or which are slow – practice them.

a)
$$\begin{array}{r} 10 \\ +1 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 7 \\ +7 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 10 \\ +8 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 7 \\ +8 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 4 \\ +6 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 1 \\ +10 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 4 \\ +7 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 3 \\ +10 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 0 \\ +7 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 3 \\ +9 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 10 \\ +7 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 6 \\ +4 \\ \hline \end{array}$$

m)
$$\begin{array}{r} 0 \\ +10 \\ \hline \end{array}$$

n)
$$\begin{array}{r} 6 \\ +9 \\ \hline \end{array}$$

o)
$$\begin{array}{r} 9 \\ +9 \\ \hline \end{array}$$

p)
$$\begin{array}{r} 10 \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 4 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{r)} \quad 2 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{s)} \quad 10 \\ + 10 \\ \hline \end{array}$$

$$\begin{array}{r} \text{t)} \quad 6 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 9 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 7 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 9 \\ + 1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 8 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{y)} \quad 7 \\ + 10 \\ \hline \end{array}$$

$$\begin{array}{r} \text{a)} \quad 9 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 8 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 9 \\ + 5 \\ \hline \end{array}$$

Answers to Exercise Eight

a) 11	b) 14	c) 18	d) 15	e) 10	f) 11	g) 11
h) 13	i) 7	f) 12	k) 17	l) 10	m) 10	n) 15
o) 18	p) 15	q) 12	r) 11	s) 20	t) 12	u) 12
v) 11	w) 10	x) 16	y) 17	z) 11	aa) 14	bb) 14

Exercise Nine

Check out your addition facts by doing this exercise as quickly as possible without counting. The highest total or sum (what the numbers add up to) for these number facts is 20. Then, make a list of any addition facts you do not know or which are slow – practice them.

a)
$$\begin{array}{r} 4 \\ +9 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 7 \\ +2 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 5 \\ +5 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 3 \\ +6 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 6 \\ +10 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 8 \\ +5 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 6 \\ +9 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 6 \\ +6 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 3 \\ +7 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 9 \\ +3 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 2 \\ +8 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 5 \\ +10 \\ \hline \end{array}$$

m)
$$\begin{array}{r} 5 \\ +5 \\ \hline \end{array}$$

n)
$$\begin{array}{r} 10 \\ +3 \\ \hline \end{array}$$

o)
$$\begin{array}{r} 8 \\ +8 \\ \hline \end{array}$$

p)
$$\begin{array}{r} 2 \\ +10 \\ \hline \end{array}$$

q)
$$\begin{array}{r} 7 \\ +9 \\ \hline \end{array}$$

r)
$$\begin{array}{r} 10 \\ +8 \\ \hline \end{array}$$

s)
$$\begin{array}{r} 5 \\ +8 \\ \hline \end{array}$$

t)
$$\begin{array}{r} 1 \\ +10 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 7 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 10 \\ + 10 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 7 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 6 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{y)} \quad 5 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{z)} \quad 9 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 10 \\ + 0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 8 \\ + 2 \\ \hline \end{array}$$

Answers to Exercise Nine

a) 13	b) 9	c) 10	d) 9	e) 16	f) 13	g) 15
h) 12	i) 10	j) 12	k) 10	l) 15	m) 10	n) 13
o) 16	p) 12	q) 16	r) 18	s) 13	t) 11	u) 13
v) 20	w) 14	x) 11	y) 12	z) 18	aa) 10	bb) 10

Exercise Ten

Check out your **addition facts** by doing this exercise as quickly as possible without counting. The highest **total** or **sum** (what the numbers add up to) for these number facts is 20. Then, make a list of any addition facts you do not know or which are slow – practice them.

$$\begin{array}{r} \text{a)} \quad 7 \\ + 10 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b)} \quad 10 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c)} \quad 8 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d)} \quad 2 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{e)} \quad 4 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{f)} \quad 3 \\ + 10 \\ \hline \end{array}$$

$$\begin{array}{r} \text{g)} \quad 7 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{h)} \quad 3 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{i)} \quad 8 \\ +3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{j)} \quad 7 \\ +8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{k)} \quad 5 \\ +9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{l)} \quad 9 \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m)} \quad 8 \\ +6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{n)} \quad 10 \\ +9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{o)} \quad 4 \\ +7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{o)} \quad 8 \\ +9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 7 \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{r)} \quad 9 \\ +10 \\ \hline \end{array}$$

$$\begin{array}{r} \text{s)} \quad 1 \\ +9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{t)} \quad 6 \\ +7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 9 \\ +4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 6 \\ +1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 6 \\ +0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 7 \\ +2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{y)} \quad 3 \\ +4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{z)} \quad 0 \\ +8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 6 \\ +4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 5 \\ +8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{cc)} \quad 2 \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{dd)} \quad 7 \\ +6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{ee)} \quad 0 \\ +3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{ff)} \quad 9 \\ +7 \\ \hline \end{array}$$

Answers to Exercise Ten

a) 17	b) 14	c) 15	d) 11	e) 10	f) 13	g) 11
h) 11	i) 11	j) 15	k) 14	l) 14	m) 14	n) 19
o) 11	p) 17	q) 12	r) 19	s) 10	t) 13	u) 13
v) 7	w) 6	x) 9	y) 7	z) 8	aa) 10	bb) 13
cc) 7	dd) 13	ee) 3	ff) 16			

Exercise Eleven

Check out your **addition facts** by doing this exercise as quickly as possible without counting. The highest **total** or **sum** (what the numbers add up to) for these number facts is 20. Check your work using the answer key at the end of the exercise. Then, make a list of any addition facts you do not know or which are slow – practice them.

a)
$$\begin{array}{r} 7 \\ + 2 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 4 \\ + 4 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 3 \\ + 5 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 4 \\ + 6 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 8 \\ + 1 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 9 \\ + 6 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 1 \\ + 3 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 0 \\ + 2 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 4 \\ + 9 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 9 \\ + 2 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 4 \\ + 1 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 8 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m)} \quad 1 \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{n)} \quad 7 \\ +3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{o)} \quad 2 \\ +2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{p)} \quad 9 \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 6 \\ +1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{r)} \quad 6 \\ +0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{s)} \quad 3 \\ +2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{t)} \quad 4 \\ +8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 5 \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 3 \\ +6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 9 \\ +8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 3 \\ +9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{y)} \quad 2 \\ +3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{z)} \quad 1 \\ +9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 2 \\ +8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 6 \\ +6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{cc)} \quad 5 \\ +4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{dd)} \quad 6 \\ +8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{ee)} \quad 4 \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{ff)} \quad 1 \\ +7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{gg)} \quad 5 \\ +6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{hh)} \quad 4 \\ +0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{ii)} \quad 3 \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{jj)} \quad 7 \\ +2 \\ \hline \end{array}$$

Answers to Exercise Eleven

a) 9	b) 8	c) 8	d) 10	e) 9	f) 15	g) 4
h) 2	i) 13	j) 11	k) 5	l) 16	m) 6	n) 10
o) 4	p) 14	q) 7	r) 6	s) 5	t) 12	u) 10
v) 9	w) 17	x) 12	y) 5	z) 10	aa) 10	bb) 12
cc) 9	dd) 14	ee) 9	ff) 8	gg) 11	hh) 4	ii) 8
jj) 9						

Need some extra practice?

Find a partner and play the following card game. You will use a regular deck of cards

- Take out the jacks, queens and kings.
- Shuffle the cards and deal them out.
- Do not look at your cards. Leave them in a pile in front of you.
- Each player flips over a card.
- Take turns adding the numbers on the cards.
- If the person whose turn it is gets the right answer that person gets to keep the cards.
- If the person whose turn it is gets the wrong answer the other player gets the cards. •

The person who collects all the cards is the winner.

- You could also set a time limit and the person with the most cards when time is up is the winner.

Exercise Twelve

Here are some extra questions if you need more practice.
The highest **total** or **sum** (what the numbers add up to) for these number facts is 20. Check your work using the answer key at the end of the exercise.

a)
$$\begin{array}{r} 6 \\ +7 \\ \hline 13 \end{array}$$

b)
$$\begin{array}{r} 8 \\ +3 \\ \hline 11 \end{array}$$

c)
$$\begin{array}{r} 4 \\ +2 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 8 \\ +7 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 1 \\ +2 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 6 \\ +4 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 5 \\ +8 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 2 \\ +5 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 7 \\ +6 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 0 \\ +3 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 9 \\ +7 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 7 \\ +2 \\ \hline \end{array}$$

m)
$$\begin{array}{r} 4 \\ +4 \\ \hline \end{array}$$

n)
$$\begin{array}{r} 3 \\ +5 \\ \hline \end{array}$$

o)
$$\begin{array}{r} 4 \\ +6 \\ \hline \end{array}$$

p)
$$\begin{array}{r} 8 \\ +1 \\ \hline \end{array}$$

q)
$$\begin{array}{r} 9 \\ +6 \\ \hline \end{array}$$

r)
$$\begin{array}{r} 1 \\ +3 \\ \hline \end{array}$$

s)
$$\begin{array}{r} 0 \\ +2 \\ \hline \end{array}$$

t)
$$\begin{array}{r} 4 \\ +9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 9 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 4 \\ + 1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 8 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 1 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{y)} \quad 7 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{z)} \quad 2 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 9 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 6 \\ + 1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{cc)} \quad 6 \\ + 0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{dd)} \quad 3 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{ee)} \quad 4 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{ff)} \quad 5 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{gg)} \quad 3 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{hh)} \quad 9 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{ii)} \quad 3 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{jj)} \quad 2 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{kk)} \quad 1 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{ll)} \quad 2 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{mm)} \quad 6 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{nn)} \quad 5 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{oo)} \quad 6 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{pp)} \quad 4 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{qq)} \quad 1 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{rr)} \quad 5 \\ + 6 \\ \hline \end{array}$$

Answers to Exercise Twelve

a) 13	b) 11	c) 6	d) 15	e) 3	f) 10	g) 13
h) 7	i) 13	j) 3	k) 16	l) 9	m) 8	n) 8
o) 10	p) 9	q) 15	r) 4	s) 2	t) 13	u) 11
v) 5	w) 16	x) 6	y) 10	z) 4	aa) 14	bb) 7
cc) 6	dd) 5	ee) 12	ff) 10	gg) 9	hh) 17	ii) 12
jj) 5	kk) 10	ll) 10	mm) 12	nn) 9	oo) 14	pp) 9
qq) 8	rr) 11					

Adding Across

So far you have only been adding numbers when they are **up and down** or **vertical**.

Example:

$$\begin{array}{r} 4 \\ + 5 \\ \hline 9 \end{array}$$

Another way to add numbers is **across** or **horizontally**.

Example: $4 + 5 = 9$

In math, sometimes you will need to work from left to right.

Exercise Thirteen Practice adding **across** or **horizontally**. The highest **total** or **sum** (what the numbers add up to) for these number facts is 20. Check your work using the answer key at the end of the exercise.

a) $10 + 0 =$

b) $2 + 2 =$

c) $5 + 3 =$

d) $1 + 1 =$

e) $8 + 4 =$

f) $7 + 1 =$

g) $0 + 4 =$

h) $6 + 3 =$

i) $3 + 2 =$

j) $1 + 10 =$

k) $9 + 3 =$

l) $4 + 9 =$

m) $3 + 7 =$

n) $4 + 8 =$

o) $8 + 0 =$

p) $6 + 4 =$

q) $4 + 1 =$

r) $7 + 2 =$

s) $10 + 10 =$

t) $6 + 5 =$

Answers to Exercise Thirteen

a) 10

b) 4

c) 8

d) 2

e) 12

f) 8

g) 4

h) 9

i) 5

j) 11

k) 12

l) 13

m) 10

n) 12

o) 8

p) 10

q) 5

r) 9

s) 20

t) 11

Exercise Fourteen

Practice adding **across or horizontally**. The highest **total** or **sum** (what the numbers add up to) for these number facts is 20. Check your work using the answer key at the end of the exercise.

a) $5 + 10 =$

b) $0 + 0 =$

c) $3 + 8 =$

d) $8 + 3 =$

e) $9 + 5 =$

f) $6 + 2 =$

g) $9 + 0 =$

h) $2 + 9 =$

i) $4 + 7 =$

j) $8 + 2 =$

k) $3 + 6 =$

l) $9 + 4 =$

m) $0 + 2 =$

n) $5 + 2 =$

o) $1 + 3 =$

p) $4 + 2 =$

q) $10 + 3 =$

r) $5 + 4 =$

s) $8 + 5 =$

t) $6 + 6 =$

Answers to Exercise Fourteen

a) 15	b) 0	c) 11	d) 11	e) 14	f) 8	g) 9
h) 11	i) 11	j) 10	k) 9	l) 13	m) 2	n) 7
o) 4	p) 6	q) 13	r) 9	s) 13	t) 12	

Exercise Fifteen

Practice adding **across or horizontally**. The highest **total** or **sum** (what the numbers add up to) for these number facts is 20. Check your work using the answer key at the end of the exercise.

a) $9 + 6 =$

b) $8 + 9 =$

c) $9 + 9 =$

d) $2 + 3 =$

e) $7 + 3 =$

f) $10 + 8 =$

g) $9 + 7 =$

h) $8 + 8 =$

i) $8 + 10 =$

j) $3 + 9 =$

k) $9 + 2 =$

l) $4 + 4 =$

m) $6 + 8 =$

n) $2 + 7 =$

o) $5 + 7 =$

p) $3 + 3 =$

q) $7 + 0 =$

r) $5 + 8 =$

s) $10 + 8 =$

t) $9 + 8 =$

Answers to Exercise Fifteen

a) 15	b) 17	c) 18	d) 5	e) 10	f) 18	g) 16
h) 16	i) 18	j) 12	k) 11	l) 8	m) 14	n) 9
o) 12	p) 6	q) 7	r) 13	s) 18	t) 17	

Word Problems

Learning addition facts is very important. Once you know them all, you can use them to solve word problems.

Words such as **more than, plus, added to, sum, total, have altogether** and **in all** tell you to add the numbers together. Look for these words when reading word problems and underline them before trying to solve a problem. Circle the information that is given.

Example: Before lunch Jane read 2 pages. After lunch she read 9 pages. How many pages did she read in all?

Before lunch Jane read 2 pages. After lunch she read 9 pages. How many pages did she read in all?

You have circled 2 pages and 9 pages. This is the information you will use to find the answer.

You have underlined “in all”. These words tell you to add.

$$\begin{array}{r} 2 \text{ pages} \\ + 9 \text{ pages} \\ \hline 11 \text{ pages} \end{array}$$

Jane read 11 pages in all.

Exercise One

Solve each of the following word problems. Be sure to underline the words that tell you to add. Circle the information that is given. Have your instructor check your underlining and circling.

- a) Sven bought 7 cans of juice on Monday. He bought 9 cans of juice on Wednesday. How many cans of juice did he buy altogether?

- b) During the hockey game, Ewan took 8 shots from the blue line and 4 shots from in front of the net. How many shots did he take in all?
- c) Marlene noticed that there were 4 people in her math class. The next day 6 more people were in her math class. What is the total number of people in Marlene's math class?
- d) The Blue Jays played two baseball games in a row. They got 10 runs in the first game and 7 runs in the second game. How many runs did they score altogether?
- e) Jaswinder had 9 apples in her grocery cart. She added 5 more different apples. How many apples did she have in total?

- f) Enlai and his dad were fishing. Enlai caught 3 fish. His father caught 5 fish. How many fish did they have in total?

Answers to Exercise One

- a) 16 cans b) 12 shots c) 10 people
d) 17 runs e) 14 apples f) 8 fish

A. Find the sums. Be sure to check your answers.**12 marks**

a)
$$\begin{array}{r} 9 \\ +6 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 5 \\ +8 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 4 \\ +2 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 7 \\ +6 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 3 \\ +5 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 1 \\ +9 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 2 \\ +3 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 6 \\ +4 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 8 \\ +1 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 9 \\ +8 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 7 \\ +4 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 5 \\ +6 \\ \hline \end{array}$$

B. Find the sums. Be sure to check your answers.**4 marks**

a) $6 + 7 =$

b) $3 + 8 =$

c) $4 + 6 =$

d) $8 + 5 =$

- C. Solve each of the following word problems. 6 marks**
Be sure to include the unit of measure in your answer. (2 marks each)

Be sure to circle information and underline what is being asked.

- a) Paco worked 5 hours on Monday and 9 hours on Tuesday. How many hours did Paco work in total?
- b) In the park, Ming-Mai counted 6 robins in the morning. In the afternoon, she counted 8 more robins. How many robins in all did Ming-Mai count?
- c) Omari bought 3 bananas on Monday. He bought 5 bananas on Tuesday. How many bananas did he buy altogether?

Answers to Topic A Self-Test

A.

- a) 15 b) 13 c) 6 d) 13 e) 8 f) 10 g) 5
h) 10 i) 9 j) 17 k) 11 l) 11

B.

- a) 13 b) 11 c) 10 d) 13

C.

- a) 14 hours b) 14 robins c) 8 bananas

Topic B: Addition of Three or More Numbers

To add three or more numbers together, use the following steps.

Step 1: Add the first two numbers together.

Step 2: Add that sum to the next number.

Step 3: Add that sum to the next number (if needed).

Example A:

$$\begin{array}{r} 6 \\ 1 \\ + 3 \\ \hline \end{array}$$

Step 1: Add the first two numbers together.

$$\begin{array}{r} 6 \\ + 1 \\ \hline 7 \end{array}$$

Step 2: Add that sum to the next number.

$$\begin{array}{r} 7 \\ + 3 \\ \hline 10 \end{array}$$

The sum of

$$\begin{array}{r} 6 \\ 1 \\ + 3 \\ \hline 10 \end{array}$$

Example B:

$$\begin{array}{r} 4 \\ 5 \\ \hline +7 \end{array}$$

Step 1: Add the first two numbers together.

$$\begin{array}{r} 4 \\ \hline +5 \\ \hline 9 \end{array}$$

Step 2: Add that sum to the third number.

$$\begin{array}{r} 9 \\ \hline +7 \\ \hline 16 \end{array}$$

The sum of

$$\begin{array}{r} 4 \\ 5 \\ \hline +7 \\ \hline 16 \end{array}$$

Example C:

$$\begin{array}{r} 1 \\ 3 \\ 4 \\ \hline +5 \end{array}$$

Step 1: Add the first two numbers together.

$$\begin{array}{r} 1 \\ \hline +3 \\ \hline 4 \end{array}$$

Step 2: Add that sum to the third number.

$$\begin{array}{r} 4 \\ \hline +4 \\ \hline 8 \end{array}$$

Step 3: Add that sum to the fourth number.

$$\begin{array}{r} 8 \\ +5 \\ \hline 13 \end{array}$$

The sum of

$$\begin{array}{r} 1 \\ 3 \\ 4 \\ +5 \\ \hline 13 \end{array}$$

Exercise One

Find the sums. Check your work using the answer key at the end of the exercise.

a)

$$\begin{array}{r} 1 \\ 2 \\ +5 \\ \hline \end{array}$$

b)

$$\begin{array}{r} 6 \\ 3 \\ +2 \\ \hline \end{array}$$

c)

$$\begin{array}{r} 7 \\ 1 \\ +6 \\ \hline \end{array}$$

d)

$$\begin{array}{r} 3 \\ 6 \\ +5 \\ \hline \end{array}$$

e)

$$\begin{array}{r} 8 \\ 1 \\ +4 \\ \hline \end{array}$$

f)

$$\begin{array}{r} 5 \\ 4 \\ +8 \\ \hline \end{array}$$

g)

$$\begin{array}{r} 1 \\ 5 \\ +7 \\ \hline \end{array}$$

h)

$$\begin{array}{r} 7 \\ 2 \\ +5 \\ \hline \end{array}$$

i)

$$\begin{array}{r} 1 \\ 8 \\ +3 \\ \hline \end{array}$$

j)

$$\begin{array}{r} 4 \\ 5 \\ +9 \\ \hline \end{array}$$

k)

$$\begin{array}{r} 2 \\ 2 \\ +8 \\ \hline \end{array}$$

l)

$$\begin{array}{r} 6 \\ 3 \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m)} \quad 7 \\ \quad 2 \\ \hline +5 \end{array}$$

$$\begin{array}{r} \text{n)} \quad 3 \\ \quad 2 \\ \hline +5 \end{array}$$

$$\begin{array}{r} \text{o)} \quad 6 \\ \quad 2 \\ \hline +5 \end{array}$$

$$\begin{array}{r} \text{p)} \quad 4 \\ \quad 4 \\ \hline +5 \end{array}$$

$$\begin{array}{r} \text{q)} \quad 3 \\ \quad 3 \\ \hline +9 \end{array}$$

$$\begin{array}{r} \text{r)} \quad 7 \\ \quad 1 \\ \hline +9 \end{array}$$

$$\begin{array}{r} \text{s)} \quad 1 \\ \quad 7 \\ \hline +5 \end{array}$$

$$\begin{array}{r} \text{t)} \quad 2 \\ \quad 4 \\ \hline +5 \end{array}$$

$$\begin{array}{r} \text{u)} \quad 7 \\ \quad 2 \\ \hline +8 \end{array}$$

$$\begin{array}{r} \text{v)} \quad 3 \\ \quad 5 \\ \hline +7 \end{array}$$

$$\begin{array}{r} \text{w)} \quad 1 \\ \quad 4 \\ \hline +8 \end{array}$$

$$\begin{array}{r} \text{x)} \quad 5 \\ \quad 3 \\ \hline +8 \end{array}$$

Answers to Exercise One

a) 8	b) 11	c) 14	d) 14	e) 13	f) 17	g) 13
h) 14	i) 12	j) 18	k) 12	l) 14	m) 14	n) 10
o) 13	p) 13	q) 15	r) 17	s) 13	t) 11	u) 17
v) 15	w) 13	x) 16				

Exercise Two

Find the sums. Check your work using the answer key at the end of the exercise.

a)
$$\begin{array}{r} 3 \\ 5 \\ \hline + 7 \end{array}$$

b)
$$\begin{array}{r} 2 \\ 6 \\ \hline + 8 \end{array}$$

c)
$$\begin{array}{r} 4 \\ 1 \\ \hline + 9 \end{array}$$

d)
$$\begin{array}{r} 5 \\ 4 \\ \hline + 2 \end{array}$$

e)
$$\begin{array}{r} 3 \\ 6 \\ \hline + 4 \end{array}$$

f)
$$\begin{array}{r} 2 \\ 5 \\ \hline + 4 \end{array}$$

g)
$$\begin{array}{r} 6 \\ 3 \\ \hline + 2 \end{array}$$

h)
$$\begin{array}{r} 3 \\ 5 \\ \hline + 3 \end{array}$$

i)
$$\begin{array}{r} 3 \\ 4 \\ \hline + 7 \end{array}$$

j)
$$\begin{array}{r} 4 \\ 5 \\ \hline + 9 \end{array}$$

k)
$$\begin{array}{r} 6 \\ 3 \\ \hline + 2 \end{array}$$

l)
$$\begin{array}{r} 5 \\ 2 \\ \hline + 9 \end{array}$$

m)
$$\begin{array}{r} 4 \\ 5 \\ \hline + 7 \end{array}$$

n)
$$\begin{array}{r} 5 \\ 2 \\ \hline + 8 \end{array}$$

o)
$$\begin{array}{r} 2 \\ 3 \\ \hline + 8 \end{array}$$

p)
$$\begin{array}{r} 1 \\ 5 \\ \hline + 6 \end{array}$$

q)
$$\begin{array}{r} 4 \\ 3 \\ \hline + 5 \end{array}$$

r)
$$\begin{array}{r} 2 \\ 6 \\ \hline + 5 \end{array}$$

s)
$$\begin{array}{r} 4 \\ 5 \\ \hline + 3 \end{array}$$

t)
$$\begin{array}{r} 5 \\ 2 \\ \hline + 4 \end{array}$$

$$\begin{array}{r} \text{u)} \quad 3 \\ \quad 4 \\ \hline + 7 \end{array}$$

$$\begin{array}{r} \text{v)} \quad 7 \\ \quad 1 \\ \hline + 5 \end{array}$$

$$\begin{array}{r} \text{w)} \quad 2 \\ \quad 1 \\ \hline + 9 \end{array}$$

$$\begin{array}{r} \text{x)} \quad 3 \\ \quad 6 \\ \hline + 3 \end{array}$$

Answers to Exercise Two

a) 15	b) 16	c) 14	d) 11	e) 13	f) 11	g) 11
h) 11	i) 14	j) 18	k) 11	l) 16	m) 16	n) 15
o) 13	p) 12	q) 12	r) 13	s) 12	t) 11	u) 14
v) 13	w) 12	x) 12				

Exercise Three

Find the sums. Check your work using the answer key at the end of the exercise.

$$\begin{array}{r} \text{a)} \quad 3 \\ \quad 2 \\ \hline + 8 \end{array}$$

$$\begin{array}{r} \text{b)} \quad 2 \\ \quad 1 \\ \hline + 4 \end{array}$$

$$\begin{array}{r} \text{c)} \quad 4 \\ \quad 3 \\ \hline + 1 \end{array}$$

$$\begin{array}{r} \text{d)} \quad 1 \\ \quad 2 \\ \hline + 8 \end{array}$$

$$\begin{array}{r} \text{e)} \quad 3 \\ \quad 2 \\ \hline + 2 \end{array}$$

$$\begin{array}{r} \text{f)} \quad 5 \\ \quad 1 \\ \hline + 2 \end{array}$$

$$\begin{array}{r} \text{g)} \quad 7 \\ \quad 2 \\ \hline + 8 \end{array}$$

$$\begin{array}{r} \text{h)} \quad 4 \\ \quad 2 \\ \hline + 6 \end{array}$$

$$\begin{array}{r} \text{i)} \quad 7 \\ \quad 2 \\ \hline +7 \end{array}$$

$$\begin{array}{r} \text{j)} \quad 6 \\ \quad 1 \\ \hline +1 \end{array}$$

$$\begin{array}{r} \text{k)} \quad 2 \\ \quad 7 \\ \hline +6 \end{array}$$

$$\begin{array}{r} \text{l)} \quad 3 \\ \quad 4 \\ \hline +2 \end{array}$$

$$\begin{array}{r} \text{m)} \quad 3 \\ \quad 4 \\ \hline +1 \end{array}$$

$$\begin{array}{r} \text{n)} \quad 7 \\ \quad 1 \\ \hline +9 \end{array}$$

$$\begin{array}{r} \text{o)} \quad 2 \\ \quad 6 \\ \hline +4 \end{array}$$

$$\begin{array}{r} \text{p)} \quad 3 \\ \quad 1 \\ \hline +2 \end{array}$$

$$\begin{array}{r} \text{q)} \quad 5 \\ \quad 1 \\ \hline +3 \end{array}$$

$$\begin{array}{r} \text{r)} \quad 4 \\ \quad 2 \\ \hline +6 \end{array}$$

$$\begin{array}{r} \text{s)} \quad 3 \\ \quad 4 \\ \hline +6 \end{array}$$

$$\begin{array}{r} \text{t)} \quad 8 \\ \quad 1 \\ \hline +7 \end{array}$$

$$\begin{array}{r} \text{u)} \quad 2 \\ \quad 5 \\ \hline +8 \end{array}$$

$$\begin{array}{r} \text{v)} \quad 6 \\ \quad 3 \\ \hline +1 \end{array}$$

$$\begin{array}{r} \text{w)} \quad 2 \\ \quad 7 \\ \hline +5 \end{array}$$

$$\begin{array}{r} \text{x)} \quad 6 \\ \quad 3 \\ \hline +4 \end{array}$$

Answers to Exercise Three

a) 13	b) 7	c) 8	d) 11	e) 7	f) 8	g) 17
h) 12	i) 16	j) 8	k) 15	l) 9	m) 8	n) 17
o) 12	p) 6	q) 9	r) 12	s) 13	t) 16	u) 15
v) 10	w) 14	x) 13				

Exercise Four

Find the sums. Check your work using the answer key at the end of the exercise.

$$\begin{array}{r} \text{a)} \quad 1 \\ \quad 3 \\ \quad 4 \\ \quad \underline{+5} \end{array}$$

$$\begin{array}{r} \text{b)} \quad 2 \\ \quad 3 \\ \quad 4 \\ \quad \underline{+6} \end{array}$$

$$\begin{array}{r} \text{c)} \quad 4 \\ \quad 3 \\ \quad 2 \\ \quad \underline{+8} \end{array}$$

$$\begin{array}{r} \text{d)} \quad 3 \\ \quad 1 \\ \quad 5 \\ \quad \underline{+6} \end{array}$$

$$\begin{array}{r} \text{e)} \quad 2 \\ \quad 2 \\ \quad 3 \\ \quad \underline{+2} \end{array}$$

$$\begin{array}{r} \text{f)} \quad 3 \\ \quad 3 \\ \quad 1 \\ \quad \underline{+2} \end{array}$$

$$\begin{array}{r} \text{g)} \quad 2 \\ \quad 1 \\ \quad 2 \\ \quad \underline{+4} \end{array}$$

$$\begin{array}{r} \text{h)} \quad 1 \\ \quad 2 \\ \quad 4 \\ \quad \underline{+6} \end{array}$$

$$\begin{array}{r} \text{i)} \quad 2 \\ \quad 4 \\ \quad 1 \\ \quad \underline{+6} \end{array}$$

$$\begin{array}{r} \text{j)} \quad 3 \\ \quad 2 \\ \quad 3 \\ \quad \underline{+3} \end{array}$$

$$\begin{array}{r} \text{k)} \quad 2 \\ \quad 1 \\ \quad 4 \\ \quad \underline{+0} \end{array}$$

$$\begin{array}{r} \text{l)} \quad 3 \\ \quad 1 \\ \quad 4 \\ \quad \underline{+1} \end{array}$$

$$\begin{array}{r} \text{m)} \quad 3 \\ \quad 2 \\ \quad 3 \\ \quad \underline{+2} \end{array}$$

$$\begin{array}{r} \text{n)} \quad 3 \\ \quad 5 \\ \quad 1 \\ \quad \underline{+6} \end{array}$$

$$\begin{array}{r} \text{o)} \quad 6 \\ \quad 1 \\ \quad 2 \\ \quad \underline{+9} \end{array}$$

$$\begin{array}{r} \text{p)} \quad 4 \\ \quad 3 \\ \quad 2 \\ \quad \underline{+1} \end{array}$$

$$\begin{array}{r} \text{q)} \quad 1 \\ \quad 4 \\ \quad 3 \\ \quad \underline{+5} \end{array}$$

$$\begin{array}{r} \text{r)} \quad 4 \\ \quad 2 \\ \quad 1 \\ \quad \underline{+9} \end{array}$$

$$\begin{array}{r} \text{s)} \quad 3 \\ \quad 4 \\ \quad 2 \\ \quad \underline{+7} \end{array}$$

$$\begin{array}{r} \text{t)} \quad 2 \\ \quad 4 \\ \quad 3 \\ \quad \underline{+6} \end{array}$$

$$\begin{array}{r} \text{u)} \quad 2 \\ \quad 3 \\ \quad 3 \\ \quad \underline{+5} \end{array}$$

$$\begin{array}{r} \text{v)} \quad 1 \\ \quad 3 \\ \quad 5 \\ \quad \underline{+7} \end{array}$$

$$\begin{array}{r} \text{w)} \quad 4 \\ \quad 4 \\ \quad 1 \\ \quad \underline{+8} \end{array}$$

$$\begin{array}{r} \text{x)} \quad 6 \\ \quad 2 \\ \quad 1 \\ \quad \underline{+7} \end{array}$$

Answers to Exercise Four

a) 13	b) 15	c) 17	d) 15	e) 9	f) 9	g) 9
h) 13	i) 13	j) 11	k) 7	l) 9	m) 10	n) 15
o) 18	p) 10	q) 13	r) 16	s) 16	t) 15	u) 13
v) 16	w) 17	x) 16				

Exercise Five

Find the sums. Check your work using the answer key at the end of the exercise.

$$\begin{array}{r} \text{a)} \quad 1 \\ \quad 3 \\ \quad 4 \\ \quad \underline{+8} \end{array}$$

$$\begin{array}{r} \text{b)} \quad 5 \\ \quad 3 \\ \quad 1 \\ \quad \underline{+4} \end{array}$$

$$\begin{array}{r} \text{c)} \quad 7 \\ \quad 1 \\ \quad 1 \\ \quad \underline{+9} \end{array}$$

$$\begin{array}{r} \text{d)} \quad 2 \\ \quad 3 \\ \quad 4 \\ \quad \underline{+9} \end{array}$$

$$\begin{array}{r} \text{e)} \quad 1 \\ \quad 2 \\ \quad 6 \\ \quad \underline{+9} \end{array}$$

$$\begin{array}{r} \text{f)} \quad 2 \\ \quad 3 \\ \quad 2 \\ \quad \underline{+3} \end{array}$$

$$\begin{array}{r} \text{g)} \quad 4 \\ \quad 1 \\ \quad 4 \\ \quad \underline{+6} \end{array}$$

$$\begin{array}{r} \text{h)} \quad 1 \\ \quad 3 \\ \quad 5 \\ \quad \underline{+8} \end{array}$$

$$\begin{array}{r} \text{i)} \quad 2 \\ \quad 1 \\ \quad 5 \\ \quad \underline{+7} \end{array}$$

$$\begin{array}{r} \text{j)} \quad 3 \\ \quad 1 \\ \quad 2 \\ \quad \underline{+9} \end{array}$$

$$\begin{array}{r} \text{k)} \quad 2 \\ \quad 2 \\ \quad 5 \\ \quad \underline{+8} \end{array}$$

$$\begin{array}{r} \text{l)} \quad 3 \\ \quad 2 \\ \quad 4 \\ \quad \underline{+7} \end{array}$$

$$\begin{array}{r} \text{m)} \quad 4 \\ \quad 1 \\ \quad 1 \\ \quad \underline{+2} \end{array}$$

$$\begin{array}{r} \text{n)} \quad 2 \\ \quad 4 \\ \quad 3 \\ \quad \underline{+6} \end{array}$$

$$\begin{array}{r} \text{o)} \quad 1 \\ \quad 5 \\ \quad 2 \\ \quad \underline{+1} \end{array}$$

$$\begin{array}{r} \text{p)} \quad 3 \\ \quad 3 \\ \quad 1 \\ \quad \underline{+2} \end{array}$$

$$\begin{array}{r} \text{q)} \quad 1 \\ \quad 4 \\ \quad 3 \\ \quad \underline{+6} \end{array}$$

$$\begin{array}{r} \text{r)} \quad 2 \\ \quad 1 \\ \quad 5 \\ \quad \underline{+3} \end{array}$$

$$\begin{array}{r} \text{s)} \quad 3 \\ \quad 1 \\ \quad 6 \\ \quad \underline{+5} \end{array}$$

$$\begin{array}{r} \text{t)} \quad 2 \\ \quad 3 \\ \quad 4 \\ \quad \underline{+6} \end{array}$$

$$\begin{array}{r} \text{u)} \quad 2 \\ \quad 1 \\ \quad 4 \\ \hline +8 \end{array}$$

$$\begin{array}{r} \text{v)} \quad 2 \\ \quad 3 \\ \quad 2 \\ \hline +6 \end{array}$$

$$\begin{array}{r} \text{w)} \quad 3 \\ \quad 1 \\ \quad 3 \\ \hline +2 \end{array}$$

$$\begin{array}{r} \text{x)} \quad 1 \\ \quad 0 \\ \quad 5 \\ \hline +4 \end{array}$$

Answers to Exercise Five

a) 16	b) 13	c) 18	d) 18	e) 18	f) 10	g) 15
h) 17	i) 15	j) 15	k) 17	l) 16	m) 8	n) 15
o) 9	p) 9	q) 14	r) 11	s) 15	t) 15	u) 15
v) 13	w) 9	x) 10				

Exercise Six

Find the sums. Check your work using the answer key at the end of the exercise.

$$\begin{array}{r} \text{a)} \quad 2 \\ \quad 1 \\ \quad 5 \\ \hline +0 \end{array}$$

$$\begin{array}{r} \text{b)} \quad 4 \\ \quad 2 \\ \quad 2 \\ \hline +5 \end{array}$$

$$\begin{array}{r} \text{c)} \quad 1 \\ \quad 3 \\ \quad 4 \\ \hline +3 \end{array}$$

$$\begin{array}{r} \text{d)} \quad 1 \\ \quad 2 \\ \quad 6 \\ \hline +4 \end{array}$$

$$\begin{array}{r} \text{e)} \quad 3 \\ \quad 4 \\ \quad 2 \\ \hline +6 \end{array}$$

$$\begin{array}{r} \text{f)} \quad 2 \\ \quad 4 \\ \quad 4 \\ \hline +5 \end{array}$$

$$\begin{array}{r} \text{g)} \quad 2 \\ \quad 3 \\ \quad 5 \\ \hline +1 \end{array}$$

$$\begin{array}{r} \text{h)} \quad 4 \\ \quad 3 \\ \quad 1 \\ \hline +5 \end{array}$$

$$\begin{array}{r} \text{i)} \quad 4 \\ \quad 1 \\ \quad 2 \\ \quad \underline{+1} \end{array}$$

$$\begin{array}{r} \text{j)} \quad 3 \\ \quad 2 \\ \quad 5 \\ \quad \underline{+7} \end{array}$$

$$\begin{array}{r} \text{k)} \quad 1 \\ \quad 3 \\ \quad 1 \\ \quad \underline{+3} \end{array}$$

$$\begin{array}{r} \text{l)} \quad 4 \\ \quad 2 \\ \quad 3 \\ \quad \underline{+7} \end{array}$$

$$\begin{array}{r} \text{m)} \quad 1 \\ \quad 3 \\ \quad 7 \\ \quad \underline{+1} \end{array}$$

$$\begin{array}{r} \text{n)} \quad 2 \\ \quad 1 \\ \quad 3 \\ \quad \underline{+1} \end{array}$$

$$\begin{array}{r} \text{o)} \quad 3 \\ \quad 2 \\ \quad 1 \\ \quad \underline{+1} \end{array}$$

$$\begin{array}{r} \text{p)} \quad 4 \\ \quad 1 \\ \quad 1 \\ \quad \underline{+2} \end{array}$$

$$\begin{array}{r} \text{q)} \quad 3 \\ \quad 0 \\ \quad 3 \\ \quad \underline{+1} \end{array}$$

$$\begin{array}{r} \text{r)} \quad 2 \\ \quad 1 \\ \quad 1 \\ \quad \underline{+3} \end{array}$$

$$\begin{array}{r} \text{s)} \quad 1 \\ \quad 0 \\ \quad 4 \\ \quad \underline{+3} \end{array}$$

$$\begin{array}{r} \text{t)} \quad 2 \\ \quad 3 \\ \quad 4 \\ \quad \underline{+7} \end{array}$$

$$\begin{array}{r} \text{u)} \quad 2 \\ \quad 1 \\ \quad 5 \\ \quad \underline{+6} \end{array}$$

$$\begin{array}{r} \text{v)} \quad 4 \\ \quad 3 \\ \quad 2 \\ \quad \underline{+2} \end{array}$$

$$\begin{array}{r} \text{w)} \quad 4 \\ \quad 1 \\ \quad 5 \\ \quad \underline{+6} \end{array}$$

$$\begin{array}{r} \text{x)} \quad 2 \\ \quad 4 \\ \quad 2 \\ \quad \underline{+5} \end{array}$$

Answers to Exercise Six

a) 8	b) 13	c) 11	d) 13	e) 15	f) 15	g) 11
h) 13	i) 8	j) 17	k) 8	l) 16	m) 12	n) 7
o) 7	p) 8	q) 7	r) 7	s) 8	t) 16	u) 14
v) 11	w) 16	x) 13				

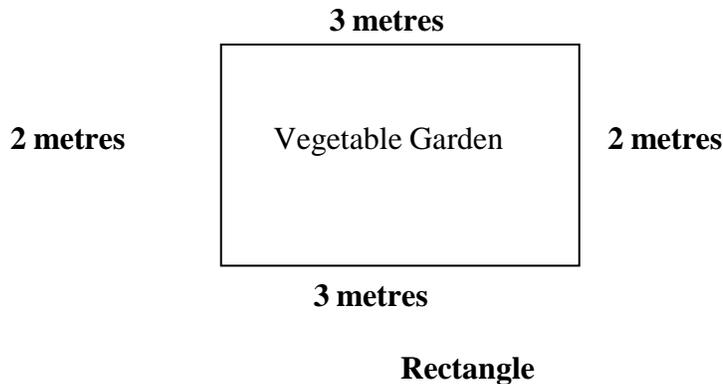
Perimeter

Did you spot the fact that each answer in the word problems before had a **unit of measure**? A **unit of measure** just tells you what you measured. **Units of measure** can be pages, fish, cans, kilometres, meters, centimetres, litres, millilitres, grams or kilograms. When you answer a word problem, you must include the **unit of measure** in your answer.

Try the following questions. Be sure to include the unit of measure in your answer.

Perimeter means **distance around**. To find the **perimeter** of a shape, find the lengths of the sides and add them together.

Example:

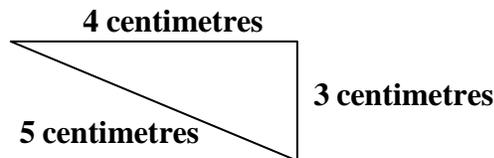


To find the perimeter, add the lengths of the sides of the rectangle.

$$\text{Perimeter} = 3 + 2 + 3 + 2$$

$$\text{Perimeter} = 10 \text{ metres}$$

Example:



Triangle

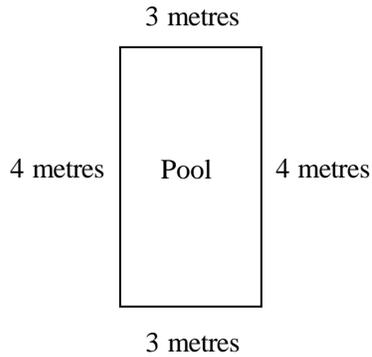
To find the perimeter, add the lengths of the sides of the triangle. $\text{Perimeter} = 4 + 3 + 5$

$$\text{Perimeter} = 12 \text{ centimetres}$$

Exercise One

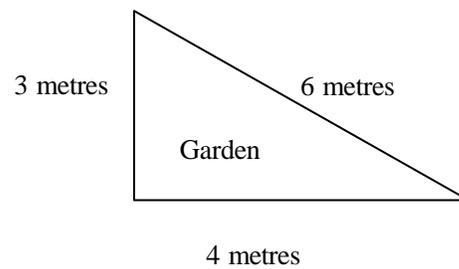
Find the perimeter of each figure. Be sure to include the units of measure in your answer. Check your work using the answer key at the end of the exercise.

- a) Find the perimeter of the swimming pool.



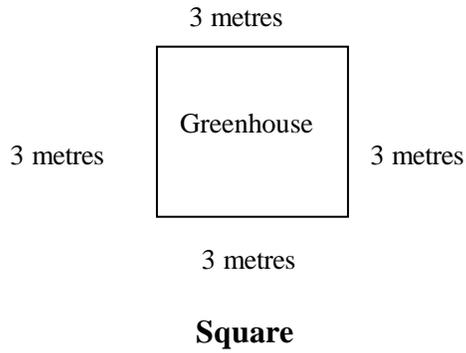
Rectangle

- b) Find the perimeter of the garden.

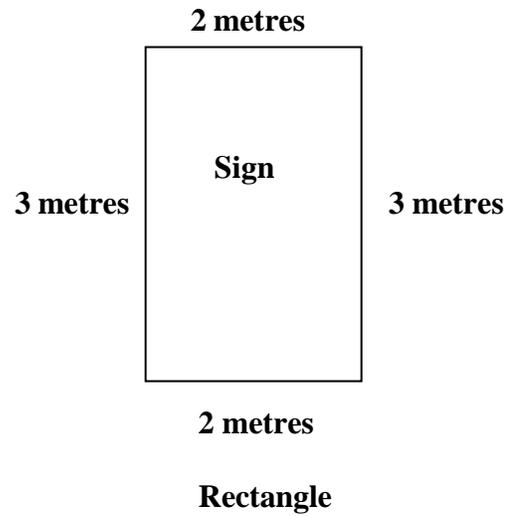


Triangle

- c) Find the perimeter of the greenhouse.



- d) Find the perimeter of the sign.



Answers to Exercise One

- a) 14 metres b) 13 metres c) 12 metres d) 10 metres

Topic B: Self-Test

Mark /18

Aim 15/18

A. Find the sums. Be sure to check your answers.

12 marks

a)

$$\begin{array}{r} 4 \\ 6 \\ +2 \\ \hline \end{array}$$

b)

$$\begin{array}{r} 3 \\ 6 \\ +9 \\ \hline \end{array}$$

c)

$$\begin{array}{r} 7 \\ 2 \\ +8 \\ \hline \end{array}$$

f)

$$\begin{array}{r} 2 \\ 1 \\ +4 \\ \hline \end{array}$$

g)

$$\begin{array}{r} 3 \\ 5 \\ +8 \\ \hline \end{array}$$

h)

$$\begin{array}{r} 4 \\ 6 \\ +7 \\ \hline \end{array}$$

i)

$$\begin{array}{r} 3 \\ 1 \\ 5 \\ +2 \\ \hline \end{array}$$

j)

$$\begin{array}{r} 4 \\ 2 \\ 3 \\ +7 \\ \hline \end{array}$$

k)

$$\begin{array}{r} 5 \\ 3 \\ 1 \\ +8 \\ \hline \end{array}$$

l)

$$\begin{array}{r} 3 \\ 5 \\ 1 \\ +3 \\ \hline \end{array}$$

m)

$$\begin{array}{r} 1 \\ 5 \\ 4 \\ +6 \\ \hline \end{array}$$

n)

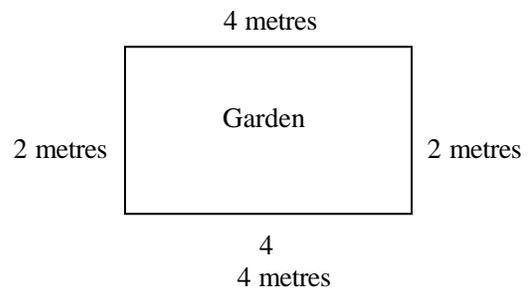
$$\begin{array}{r} 2 \\ 1 \\ 6 \\ +5 \\ \hline \end{array}$$

- B. Solve each of the following word problems. 6 marks**
Be sure to include the unit of measure in your answer. (2 marks each)
Be sure to circle information and underline what is being asked.

a) It took the cleanup crew 4 hours on Monday, 3 hours on Tuesday and 9 hours on Wednesday to clean the factory after each day's work. How many hours in total did it take to clean the factory?

b) Nella wants to put a fence around her garden. The garden measures 5 metres, 3 metres and 1 metre. How much fence does she need?

c) Find the perimeter of the garden.



Answers to Topic B Self-Test

A.

- a) 12 b) 18 c) 17 d) 7 e) 16 f) 17
g) 11 h) 16 i) 17 j) 12 k) 16 l) 14

B.

- a) 16 hours b) 9 metres c) 12 metres

Topic C: Addition of Larger Numbers

Use these steps to complete each addition question.

Step 1: Add the ones to the ones.

Step 2: Add the tens to the tens.

Step 3: Add the hundreds to the hundreds.

Example A:

$$\begin{array}{r} 23 \\ + 56 \\ \hline \end{array}$$

Step 1: Add the ones to the ones. 3 ones + 6 ones = 9 ones

$$\begin{array}{r} 23 \\ + 56 \\ \hline 9 \end{array}$$

Write the answer in line with the ones in the question.

Step 2: Add the tens. 2 tens + 5 tens = 7 tens

$$\begin{array}{r} 23 \\ + 56 \\ \hline 79 \end{array}$$

The sum of $23 + 56 = 79$

Example B:

$$\begin{array}{r} 372 \\ + 415 \\ \hline \end{array}$$

Step 1: Add the ones. 2 ones + 5 ones = 7 ones

$$\begin{array}{r} 372 \\ + 415 \\ \hline 7 \end{array}$$

Step 2: Add the tens. 7 tens + 1 ten = 8 tens

$$\begin{array}{r} 372 \\ + 415 \\ \hline 87 \end{array}$$

Step 3: Add the hundreds. 3 hundreds + 4 hundreds = 7 hundreds

$$\begin{array}{r} 372 \\ + 415 \\ \hline 787 \end{array}$$

Exercise One

Find the sums. Check your work using the answer key at the end of the exercise.

a)
$$\begin{array}{r} 54 \\ + 32 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 20 \\ + 69 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 58 \\ + 21 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 62 \\ + 13 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 73 \\ + 14 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 44 \\ + 54 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 10 \\ + 75 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 36 \\ + 22 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 10 \\ + 36 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 16 \\ + 23 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 40 \\ + 50 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 37 \\ + 32 \\ \hline \end{array}$$

m)
$$\begin{array}{r} 14 \\ + 50 \\ \hline \end{array}$$

n)
$$\begin{array}{r} 23 \\ + 16 \\ \hline \end{array}$$

o)
$$\begin{array}{r} 41 \\ + 38 \\ \hline \end{array}$$

p)
$$\begin{array}{r} 40 \\ + 11 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 28 \\ + 70 \\ \hline \end{array}$$

$$\begin{array}{r} \text{r)} \quad 21 \\ + 56 \\ \hline \end{array}$$

$$\begin{array}{r} \text{s)} \quad 72 \\ + 12 \\ \hline \end{array}$$

$$\begin{array}{r} \text{t)} \quad 31 \\ + 14 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 47 \\ + 12 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 34 \\ + 65 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 63 \\ + 34 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 31 \\ + 45 \\ \hline \end{array}$$

Answers to Exercise One

a) 86	b) 89	c) 79	d) 75	e) 87	f) 98	g) 85
h) 58	i) 46	j) 39	k) 90	l) 69	m) 64	n) 39
o) 79	p) 51	q) 98	r) 77	s) 84	t) 45	u) 59
v) 99	w) 97	x) 76				

Exercise Two

Find the sums. Check your work using the answer key at the end of the exercise.

$$\begin{array}{r} \text{a)} \quad 47 \\ + 51 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b)} \quad 65 \\ + 24 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c)} \quad 78 \\ + 21 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d)} \quad 84 \\ + 12 \\ \hline \end{array}$$

$$\begin{array}{r} \text{e)} \quad 73 \\ + 22 \\ \hline \end{array}$$

$$\begin{array}{r} \text{f)} \quad 64 \\ + 13 \\ \hline \end{array}$$

$$\begin{array}{r} \text{g)} \quad 25 \\ + 64 \\ \hline \end{array}$$

$$\begin{array}{r} \text{h)} \quad 51 \\ + 38 \\ \hline \end{array}$$

$$\begin{array}{r} \text{i)} \quad 26 \\ +43 \\ \hline \end{array}$$

$$\begin{array}{r} \text{j)} \quad 40 \\ +57 \\ \hline \end{array}$$

$$\begin{array}{r} \text{k)} \quad 76 \\ +23 \\ \hline \end{array}$$

$$\begin{array}{r} \text{l)} \quad 86 \\ +13 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m)} \quad 28 \\ +71 \\ \hline \end{array}$$

$$\begin{array}{r} \text{n)} \quad 35 \\ +62 \\ \hline \end{array}$$

$$\begin{array}{r} \text{o)} \quad 27 \\ +12 \\ \hline \end{array}$$

$$\begin{array}{r} \text{p)} \quad 19 \\ +40 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 41 \\ +43 \\ \hline \end{array}$$

$$\begin{array}{r} \text{r)} \quad 53 \\ +32 \\ \hline \end{array}$$

$$\begin{array}{r} \text{s)} \quad 61 \\ +22 \\ \hline \end{array}$$

$$\begin{array}{r} \text{t)} \quad 52 \\ +21 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 23 \\ +64 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 32 \\ +43 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 13 \\ +65 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 46 \\ +42 \\ \hline \end{array}$$

Answers to Exercise Two

a) 98	b) 89	c) 99	d) 96	e) 95	f) 77	g) 89
h) 89	i) 69	j) 97	k) 99	l) 99	m) 99	n) 97
o) 39	p) 59	q) 84	r) 85	s) 83	t) 73	u) 87
v) 75	w) 78	x) 88				

Exercise Three

Find the sums. Check your work using the answer key at the end of the exercise.

a)
$$\begin{array}{r} 32 \\ + 64 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 23 \\ + 54 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 61 \\ + 22 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 83 \\ + 11 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 32 \\ + 45 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 63 \\ + 33 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 75 \\ + 24 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 46 \\ + 12 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 44 \\ + 35 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 25 \\ + 42 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 41 \\ + 38 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 54 \\ + 45 \\ \hline \end{array}$$

m)
$$\begin{array}{r} 25 \\ + 32 \\ \hline \end{array}$$

n)
$$\begin{array}{r} 35 \\ + 42 \\ \hline \end{array}$$

o)
$$\begin{array}{r} 32 \\ + 44 \\ \hline \end{array}$$

p)
$$\begin{array}{r} 22 \\ + 14 \\ \hline \end{array}$$

q)
$$\begin{array}{r} 57 \\ + 21 \\ \hline \end{array}$$

r)
$$\begin{array}{r} 42 \\ + 54 \\ \hline \end{array}$$

s)
$$\begin{array}{r} 34 \\ + 23 \\ \hline \end{array}$$

t)
$$\begin{array}{r} 25 \\ + 42 \\ \hline \end{array}$$

u)
$$\begin{array}{r} 13 \\ + 41 \\ \hline \end{array}$$

v)
$$\begin{array}{r} 60 \\ + 25 \\ \hline \end{array}$$

w)
$$\begin{array}{r} 34 \\ + 62 \\ \hline \end{array}$$

x)
$$\begin{array}{r} 77 \\ + 21 \\ \hline \end{array}$$

Answers to Exercise Three

a) 96	b) 77	c) 83	d) 94	e) 77	f) 96	g) 99
h) 58	i) 79	j) 67	k) 79	l) 99	m) 57	n) 77
o) 76	p) 36	q) 78	r) 96	s) 57	t) 67	u) 54
v) 85	w) 96	x) 98				

Exercise Four

Find the sums. Check your work using the answer key at the end of the exercise.

a)
$$\begin{array}{r} 286 \\ + 513 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 649 \\ + 250 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 156 \\ + 542 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 503 \\ + 361 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 273 \\ + 620 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 27 \\ + 961 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 852 \\ + 36 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 300 \\ + 50 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 364 \\ + 523 \\ \hline \end{array}$$

$$\begin{array}{r} \text{j)} \quad 568 \\ + 210 \\ \hline \end{array}$$

$$\begin{array}{r} \text{k)} \quad 432 \\ + 325 \\ \hline \end{array}$$

$$\begin{array}{r} \text{l)} \quad 621 \\ + 214 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m)} \quad 312 \\ + 541 \\ \hline \end{array}$$

$$\begin{array}{r} \text{n)} \quad 135 \\ + 420 \\ \hline \end{array}$$

$$\begin{array}{r} \text{o)} \quad 231 \\ + 354 \\ \hline \end{array}$$

$$\begin{array}{r} \text{p)} \quad 532 \\ + 141 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 537 \\ + 21 \\ \hline \end{array}$$

$$\begin{array}{r} \text{r)} \quad 145 \\ + 441 \\ \hline \end{array}$$

$$\begin{array}{r} \text{s)} \quad 235 \\ + 214 \\ \hline \end{array}$$

$$\begin{array}{r} \text{t)} \quad 723 \\ + 113 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 521 \\ + 344 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 624 \\ + 174 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 524 \\ + 221 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 463 \\ + 425 \\ \hline \end{array}$$

Answers to Exercise Four

a) 799	b) 899	c) 698	d) 864	e) 893	f) 988	g) 888
h) 350	i) 887	j) 778	k) 757	l) 835	m) 853	n) 555
o) 585	p) 673	q) 558	r) 586	s) 449	t) 836	u) 865
v) 798	w) 745	x) 888				

Exercise Five

Find the sums. Check your work using the answer key at the end of the exercise.

a)
$$\begin{array}{r} 172 \\ + 401 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 314 \\ + 553 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 431 \\ + 317 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 213 \\ + 384 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 163 \\ + 224 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 412 \\ + 531 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 731 \\ + 142 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 314 \\ + 524 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 253 \\ + 401 \\ \hline \end{array}$$

$$\begin{array}{r} \text{j)} \quad 243 \\ + 425 \\ \hline \end{array}$$

$$\begin{array}{r} \text{k)} \quad 653 \\ + 434 \\ \hline \end{array}$$

$$\begin{array}{r} \text{l)} \quad 576 \\ + 303 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m)} \quad 732 \\ + 210 \\ \hline \end{array}$$

$$\begin{array}{r} \text{n)} \quad 251 \\ + 734 \\ \hline \end{array}$$

$$\begin{array}{r} \text{o)} \quad 605 \\ + 143 \\ \hline \end{array}$$

$$\begin{array}{r} \text{p)} \quad 715 \\ + 223 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 254 \\ + 125 \\ \hline \end{array}$$

$$\begin{array}{r} \text{r)} \quad 351 \\ + 645 \\ \hline \end{array}$$

$$\begin{array}{r} \text{s)} \quad 754 \\ + 231 \\ \hline \end{array}$$

$$\begin{array}{r} \text{t)} \quad 425 \\ + 143 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 465 \\ + 233 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 501 \\ + 368 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 335 \\ + 403 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 561 \\ + 234 \\ \hline \end{array}$$

Answers to Exercise Five

a) 573	b) 867	c) 748	d) 597	e) 387	f) 943	g) 873
h) 838	i) 654	j) 668	k) 1087	l) 879	m) 942	n) 985
o) 748	p) 938	q) 379	r) 996	s) 985	t) 568	u) 698
v) 869	w) 738	x) 795				

Exercise Six

Find the sums. Check your work using the answer key at the end of the exercise.

a)
$$\begin{array}{r} 754 \\ + 231 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 410 \\ + 257 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 653 \\ + 142 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 815 \\ + 170 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 243 \\ + 146 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 615 \\ + 303 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 124 \\ + 762 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 451 \\ + 206 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 705 \\ + 261 \\ \hline \end{array}$$

$$\begin{array}{r} \text{j)} \quad 627 \\ + 512 \\ \hline \end{array}$$

$$\begin{array}{r} \text{k)} \quad 357 \\ + 130 \\ \hline \end{array}$$

$$\begin{array}{r} \text{l)} \quad 725 \\ + 273 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m)} \quad 753 \\ + 902 \\ \hline \end{array}$$

$$\begin{array}{r} \text{n)} \quad 425 \\ + 203 \\ \hline \end{array}$$

$$\begin{array}{r} \text{o)} \quad 652 \\ + 137 \\ \hline \end{array}$$

$$\begin{array}{r} \text{p)} \quad 357 \\ + 132 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 675 \\ + 214 \\ \hline \end{array}$$

$$\begin{array}{r} \text{r)} \quad 802 \\ + 254 \\ \hline \end{array}$$

$$\begin{array}{r} \text{s)} \quad 524 \\ + 321 \\ \hline \end{array}$$

$$\begin{array}{r} \text{t)} \quad 723 \\ + 306 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 243 \\ + 152 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 145 \\ + 213 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 262 \\ + 321 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 545 \\ + 131 \\ \hline \end{array}$$

Answers to Exercise Six

a) 985	b) 667	c) 795	d) 985	e) 389	f) 918	g) 886
h) 657	i) 966	j) 1 139	k) 487	l) 998	m) 1 655	n) 628
o) 789	p) 489	q) 889	r) 1 056	s) 845	t) 1 029	u) 395
v) 358	w) 583	x) 676				

Topic C: Self-Test

Mark /22 Aim 19/22

A. Find the sums. Be sure to check your answers.

12 marks

a)
$$\begin{array}{r} 46 \\ + 23 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 32 \\ + 13 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 72 \\ + 25 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 56 \\ + 21 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 65 \\ + 34 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 25 \\ + 51 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 324 \\ + 263 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 183 \\ + 514 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 753 \\ + 145 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 618 \\ + 120 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 224 \\ + 465 \\ \hline \end{array}$$

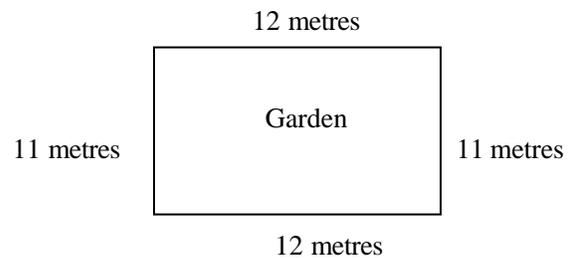
l)
$$\begin{array}{r} 563 \\ + 216 \\ \hline \end{array}$$

- B. Solve each of the following word problems. 6 marks**
Be sure to include the unit of measure in your answer. (2 marks each)
Be sure to circle information and underline what is being asked.

a) Mahala's dad worked 45 hours one week and 52 hours the next week. How many hours did he work during those two weeks?

b) A trucker drove 526 kilometers on the first trip and 341 kilometers on the next. How many kilometers did the trucker drive altogether?

c) Find the perimeter of the garden.



Answers to Topic C Self-Test

A.

- a) 69 b) 45 c) 97 d) 77 e) 99 f) 76
g) 587 h) 697 i) 898 j) 738 k) 689 l) 779

B.

- a) 97 hours b) 867 kilometres c) 46 metres

Emotions Check

How are you feeling? Are your palms moist? How is your breathing?

Take control. Be the boss. If you are feeling anxious, practice your breathing exercise.

Remember: breathe in slowly to the count of four, hold it for the count of four, and breathe out slowly to the count of four.

Unit 2 Review - Addition

You will now practice all the skills you learned in Unit 2. Check your work using the answer key at the end of the review.

A. Check out your addition facts.

a)
$$\begin{array}{r} 5 \\ +6 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 8 \\ +2 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 3 \\ +4 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 9 \\ +7 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 7 \\ +10 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 6 \\ +8 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 9 \\ +4 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 2 \\ +3 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 8 \\ +4 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 3 \\ +3 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 9 \\ +9 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 5 \\ +4 \\ \hline \end{array}$$

m)
$$\begin{array}{r} 1 \\ +2 \\ \hline \end{array}$$

n)
$$\begin{array}{r} 3 \\ +1 \\ \hline \end{array}$$

o)
$$\begin{array}{r} 6 \\ +9 \\ \hline \end{array}$$

p)
$$\begin{array}{r} 5 \\ +3 \\ \hline \end{array}$$

B. Add across or horizontally.

a) $8 + 7 =$

b) $0 + 3 =$

c) $8 + 10 =$

d) $5 + 2 =$

e) $2 + 2 =$

f) $7 + 5 =$

g) $9 + 8 =$

h) $3 + 6 =$

i) $9 + 5 =$

j) $1 + 5 =$

k) $6 + 10 =$

l) $4 + 1 =$

m) $7 + 3 =$

n) $5 + 8 =$

o) $2 + 6 =$

p) $8 + 3 =$

C. Find the sums.

a)
$$\begin{array}{r} 6 \\ 2 \\ \hline +4 \end{array}$$

b)
$$\begin{array}{r} 5 \\ 2 \\ \hline +1 \end{array}$$

c)
$$\begin{array}{r} 4 \\ 4 \\ \hline +8 \end{array}$$

d)
$$\begin{array}{r} 3 \\ 4 \\ \hline +5 \end{array}$$

e)
$$\begin{array}{r} 2 \\ 3 \\ \hline +4 \end{array}$$

f)
$$\begin{array}{r} 6 \\ 4 \\ \hline +7 \end{array}$$

$$\begin{array}{r} \text{g)} \quad 3 \\ 4 \\ \hline + 6 \end{array}$$

$$\begin{array}{r} \text{h)} \quad 7 \\ 2 \\ \hline + 4 \end{array}$$

$$\begin{array}{r} \text{i)} \quad 3 \\ 6 \\ \hline + 8 \end{array}$$

D. Find the sums.

$$\begin{array}{r} \text{a)} \quad 26 \\ \hline + 30 \end{array}$$

$$\begin{array}{r} \text{b)} \quad 42 \\ \hline + 57 \end{array}$$

$$\begin{array}{r} \text{c)} \quad 44 \\ \hline + 32 \end{array}$$

$$\begin{array}{r} \text{d)} \quad 32 \\ \hline + 81 \end{array}$$

$$\begin{array}{r} \text{e)} \quad 83 \\ \hline + 13 \end{array}$$

$$\begin{array}{r} \text{f)} \quad 76 \\ \hline + 12 \end{array}$$

$$\begin{array}{r} \text{g)} \quad 34 \\ \hline + 51 \end{array}$$

$$\begin{array}{r} \text{h)} \quad 54 \\ \hline + 22 \end{array}$$

$$\begin{array}{r} \text{i)} \quad 52 \\ \hline + 43 \end{array}$$

$$\begin{array}{r} \text{j)} \quad 25 \\ \hline + 42 \end{array}$$

$$\begin{array}{r} \text{k)} \quad 72 \\ \hline + 35 \end{array}$$

$$\begin{array}{r} \text{l)} \quad 66 \\ \hline + 12 \end{array}$$

E. Find the sums.

a)
$$\begin{array}{r} 342 \\ + 523 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 725 \\ + 142 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 362 \\ + 417 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 425 \\ + 172 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 284 \\ + 314 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 315 \\ + 132 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 363 \\ + 415 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 741 \\ + 225 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 403 \\ + 445 \\ \hline \end{array}$$

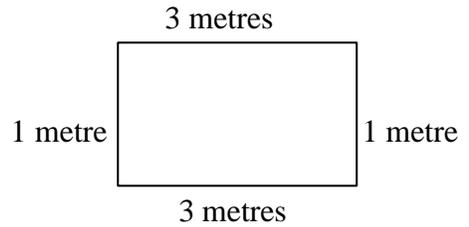
j)
$$\begin{array}{r} 654 \\ + 215 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 234 \\ + 352 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 525 \\ + 431 \\ \hline \end{array}$$

F. Word Problems.

- a) Find the perimeter of the shape. Be sure to put the unit of measure in your answer. Write the name of the shape below the picture.



- b)
-
- A square is shown with its dimensions labeled. The top side is labeled "5 metres", the bottom side is labeled "5 metres", the left side is labeled "5 metres", and the right side is labeled "5 metres".

- c) The CN Tower in Toronto is 554 metres high. On top of the tower is a TV mast that is 122 metres high. What is the total height of the tower and TV mast?

- d) Seung weighs 36 kilograms. His father weighs 62 kilograms. How much do they weigh altogether?

Answers to Unit 2 Review

A.

- | | | | | |
|-------|-------|------|-------|-------|
| a) 11 | b) 10 | c) 7 | d) 16 | e) 17 |
| f) 14 | g) 13 | h) 5 | i) 12 | j) 6 |
| k) 18 | l) 9 | m) 3 | n) 4 | o) 15 |
| p) 8 | | | | |

B.

- | | | | | |
|-------|-------|-------|-------|------|
| a) 15 | b) 3 | c) 18 | d) 7 | e) 4 |
| f) 12 | g) 17 | h) 9 | i) 14 | j) 6 |
| k) 16 | l) 5 | m) 10 | n) 13 | o) 8 |
| p) 11 | | | | |

C.

- | | | | | |
|-------|-------|-------|-------|------|
| a) 12 | b) 8 | c) 16 | d) 12 | e) 9 |
| f) 17 | g) 13 | h) 13 | i) 17 | |

D.

- | | | | | |
|--------|-------|-------|--------|-------|
| a) 56 | b) 99 | c) 76 | d) 113 | e) 96 |
| f) 88 | g) 85 | h) 76 | i) 95 | j) 67 |
| k) 107 | l) 78 | | | |

E.

- | | | | | |
|--------|--------|--------|--------|--------|
| a) 865 | b) 867 | c) 779 | d) 597 | e) 598 |
| f) 447 | g) 778 | h) 966 | i) 848 | j) 869 |
| k) 586 | l) 956 | | | |

F.

- | | | | |
|------------------------|----------------------|---------------|-----------------|
| a) 8 metres, rectangle | b) 20 metres, square | c) 676 metres | d) 98 kilograms |
|------------------------|----------------------|---------------|-----------------|

CONGRATULATIONS!!

Now you have finished Unit 2.

TEST TIME!

Ask your instructor for the
Practice Test for this unit.
Once you've done the practice test,
you need to do the unit 2 test.
Again, ask your instructor for this.
Good luck!

Unit 3

Subtraction

Topic A: Subtraction

Subtraction takes an amount **away** from another amount. The result of subtraction is called the **difference**.

The **minus sign** $-$ means to subtract.

$$\begin{array}{cccccccccccc} \diamond & \diamond \\ 9 & - & 3 & = & 6 \end{array}$$

says nine minus three equals six **or** nine take away three is six

The **difference** between 9 and 3 is 6.

Subtraction is the opposite of addition. Look at the examples:

$5 + 4 = 9$	$9 - 4 = 5$	$\begin{array}{r} 8 \\ +3 \\ \hline 11 \end{array}$	$\begin{array}{r} 11 \\ -3 \\ \hline 8 \end{array}$
$4 + 5 = 9$	$9 - 5 = 4$	$\begin{array}{r} 3 \\ +8 \\ \hline 11 \end{array}$	$\begin{array}{r} 11 \\ -8 \\ \hline 3 \end{array}$

Subtraction facts are a tool that you will use to do subtraction questions.

Exercise One

Check out your **subtraction facts** by doing this exercise as quickly as you can. Use your addition facts to help find the subtraction facts. Check your work using the answer key at the end of the exercise. Then, make a list of any subtraction facts you do not know or which are slow for you and practice them.

a) $\begin{array}{r} 5 \\ -4 \\ \hline \end{array}$

b) $\begin{array}{r} 3 \\ -2 \\ \hline \end{array}$

c) $\begin{array}{r} 7 \\ -7 \\ \hline \end{array}$

d) $\begin{array}{r} 1 \\ -0 \\ \hline \end{array}$

$$\begin{array}{r} \text{e)} \quad 8 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{f)} \quad 9 \\ \underline{-7} \end{array}$$

$$\begin{array}{r} \text{g)} \quad 4 \\ \underline{-3} \end{array}$$

$$\begin{array}{r} \text{h)} \quad 6 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{i)} \quad 7 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{j)} \quad 2 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{k)} \quad 7 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{l)} \quad 8 \\ \underline{-7} \end{array}$$

$$\begin{array}{r} \text{m)} \quad 0 \\ \underline{-0} \end{array}$$

$$\begin{array}{r} \text{n)} \quad 7 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{o)} \quad 3 \\ \underline{-0} \end{array}$$

$$\begin{array}{r} \text{p)} \quad 6 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{q)} \quad 4 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{r)} \quad 6 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{s)} \quad 9 \\ \underline{-5} \end{array}$$

$$\begin{array}{r} \text{t)} \quad 8 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{u)} \quad 5 \\ \underline{-3} \end{array}$$

$$\begin{array}{r} \text{v)} \quad 8 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{w)} \quad 1 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{x)} \quad 7 \\ \underline{-0} \end{array}$$

$$\begin{array}{r} \text{y)} \quad 9 \\ \underline{-9} \end{array}$$

$$\begin{array}{r} \text{z)} \quad 3 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 2 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 7 \\ \underline{-4} \end{array}$$

Answers to Exercise One

a) 1	b) 1	c) 0	d) 1	e) 6	f) 2	g) 1
h) 5	i) 5	j) 0	k) 1	l) 1	m) 0	n) 6
o) 3	p) 0	q) 2	r) 4	s) 4	t) 2	u) 2
v) 7	w) 0	x) 7	y) 0	z) 2	aa) 1	bb) 3

Exercise Two

Check out your **subtraction facts** by doing this exercise as quickly as you can. Use your addition facts to help find the subtraction facts. Check your work using the answer key at the end of the exercise. Then, make a list of any subtraction facts you do not know or which are slow for you and practice them.

a)
$$\begin{array}{r} 8 \\ -4 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 9 \\ -1 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 7 \\ -5 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 6 \\ -4 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 9 \\ -4 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 5 \\ -2 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 2 \\ -0 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 6 \\ -3 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 8 \\ -3 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 6 \\ -5 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 4 \\ -4 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 9 \\ -0 \\ \hline \end{array}$$

m)
$$\begin{array}{r} 7 \\ -3 \\ \hline \end{array}$$

n)
$$\begin{array}{r} 5 \\ -5 \\ \hline \end{array}$$

o)
$$\begin{array}{r} 9 \\ -8 \\ \hline \end{array}$$

p)
$$\begin{array}{r} 3 \\ -3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 5 \\ \underline{-0} \end{array}$$

$$\begin{array}{r} \text{r)} \quad 9 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{s)} \quad 4 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{t)} \quad 8 \\ \underline{-5} \end{array}$$

$$\begin{array}{r} \text{u)} \quad 5 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{v)} \quad 9 \\ \underline{-3} \end{array}$$

$$\begin{array}{r} \text{w)} \quad 6 \\ \underline{-0} \end{array}$$

$$\begin{array}{r} \text{x)} \quad 8 \\ \underline{-8} \end{array}$$

$$\begin{array}{r} \text{y)} \quad 9 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{z)} \quad 4 \\ \underline{-0} \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 8 \\ \underline{-0} \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 7 \\ \underline{-4} \end{array}$$

Answers to Exercise Two

a) 4	b) 8	c) 2	d) 2	e) 5	f) 3	g) 2
h) 3	i) 5	j) 1	k) 0	l) 9	m) 4	n) 0
o) 1	p) 0	q) 5	r) 7	s) 3	t) 3	u) 4
v) 6	w) 6	x) 0	y) 3	z) 4	aa) 8	bb) 3

Exercise Three

Check out your **subtraction facts** by doing this exercise as quickly as you can. Use your addition facts to help find the subtraction facts. Check your work using the answer key at the end of the exercise. Then, make a list of any subtraction facts you do not know or which are slow for you – practice the.

$$\begin{array}{r} \text{a)} \quad 8 \\ \underline{-4} \end{array}$$

$$\begin{array}{r} \text{b)} \quad 5 \\ \underline{-5} \end{array}$$

$$\begin{array}{r} \text{c)} \quad 2 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{d)} \quad 4 \\ \underline{-3} \end{array}$$

$$\begin{array}{r} \text{e)} \quad 3 \\ -3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{f)} \quad 6 \\ -3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{g)} \quad 7 \\ -6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{h)} \quad 9 \\ -2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{i)} \quad 9 \\ -0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{j)} \quad 5 \\ -4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{k)} \quad 8 \\ -8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{l)} \quad 4 \\ -2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m)} \quad 7 \\ -7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{n)} \quad 2 \\ -0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{o)} \quad 6 \\ -1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{p)} \quad 9 \\ -8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 6 \\ -4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{r)} \quad 3 \\ -1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{s)} \quad 9 \\ -9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{t)} \quad 8 \\ -7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 3 \\ -2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 7 \\ -5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 8 \\ -3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 9 \\ -5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{y)} \quad 8 \\ -6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{z)} \quad 5 \\ -3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 7 \\ -1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 6 \\ -5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{cc)} \quad 4 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{dd)} \quad 1 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{ee)} \quad 0 \\ \underline{-0} \end{array}$$

$$\begin{array}{r} \text{ff)} \quad 8 \\ \underline{-0} \end{array}$$

$$\begin{array}{r} \text{gg)} \quad 9 \\ \underline{-7} \end{array}$$

$$\begin{array}{r} \text{hh)} \quad 6 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{ii)} \quad 9 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{jj)} \quad 7 \\ \underline{-4} \end{array}$$

$$\begin{array}{r} \text{kk)} \quad 9 \\ \underline{-3} \end{array}$$

$$\begin{array}{r} \text{ll)} \quad 8 \\ \underline{-5} \end{array}$$

$$\begin{array}{r} \text{mm)} \quad 7 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{nn)} \quad 5 \\ \underline{-1} \end{array}$$

Answers to Exercise Three

a) 4	b) 0	c) 1	d) 1	e) 0	f) 3	g) 1
h) 7	i) 9	j) 1	k) 0	l) 2	m) 0	n) 2
o) 5	p) 1	q) 2	r) 2	s) 0	t) 1	u) 1
v) 2	w) 5	x) 4	y) 2	z) 2	aa) 6	bb) 1
cc) 3	dd) 0	ee) 0	ff) 8	gg) 2	hh) 0	ii) 3
jj) 3	kk) 6	ll) 3	mm) 5	nn) 4		

Exercise Four

Check out your **subtraction facts** by doing this exercise as quickly as you can. Use your addition facts to help find the subtraction facts. Check your work using the answer key at the end of the exercise. Then, make a list of any subtraction facts you do not know or which are slow for you and practice them.

a)
$$\begin{array}{r} 11 \\ -7 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 10 \\ -4 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 12 \\ -7 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 8 \\ -6 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 10 \\ -8 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 7 \\ -4 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 9 \\ -3 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 9 \\ -5 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 7 \\ -3 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 10 \\ -9 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 12 \\ -8 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 10 \\ -7 \\ \hline \end{array}$$

m)
$$\begin{array}{r} 8 \\ -3 \\ \hline \end{array}$$

n)
$$\begin{array}{r} 11 \\ -4 \\ \hline \end{array}$$

o)
$$\begin{array}{r} 10 \\ -6 \\ \hline \end{array}$$

p)
$$\begin{array}{r} 12 \\ -5 \\ \hline \end{array}$$

q)
$$\begin{array}{r} 10 \\ -4 \\ \hline \end{array}$$

r)
$$\begin{array}{r} 12 \\ -9 \\ \hline \end{array}$$

s)
$$\begin{array}{r} 8 \\ -5 \\ \hline \end{array}$$

t)
$$\begin{array}{r} 11 \\ -2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 11 \\ \underline{-8} \end{array}$$

$$\begin{array}{r} \text{v)} \quad 12 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{w)} \quad 10 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{x)} \quad 11 \\ \underline{-6} \end{array}$$

Answers to Exercise Four

a) 4	b) 6	c) 5	d) 2	e) 2	f) 3	g) 6
h) 4	i) 4	j) 1	k) 4	l) 3	m) 5	n) 7
o) 4	p) 7	q) 6	r) 3	s) 3	t) 9	u) 3
v) 6	w) 8	x) 5				

Exercise Five

Check out your **subtraction facts** by doing this exercise as quickly as you can. Use your addition facts to help find the subtraction facts. Check your work using the answer key at the end of the exercise. Then, make a list of any subtraction facts you do not know or which are slow for you and practice them.

$$\begin{array}{r} \text{a)} \quad 12 \\ \underline{-3} \end{array}$$

$$\begin{array}{r} \text{b)} \quad 9 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{c)} \quad 11 \\ \underline{-9} \end{array}$$

$$\begin{array}{r} \text{d)} \quad 10 \\ \underline{-5} \end{array}$$

$$\begin{array}{r} \text{e)} \quad 8 \\ \underline{-8} \end{array}$$

$$\begin{array}{r} \text{f)} \quad 10 \\ \underline{-3} \end{array}$$

$$\begin{array}{r} \text{g)} \quad 12 \\ \underline{-4} \end{array}$$

$$\begin{array}{r} \text{h)} \quad 7 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{i)} \quad 9 \\ \underline{-8} \end{array}$$

$$\begin{array}{r} \text{j)} \quad 11 \\ \underline{-5} \end{array}$$

$$\begin{array}{r} \text{k)} \quad 9 \\ \underline{-7} \end{array}$$

$$\begin{array}{r} \text{l)} \quad 11 \\ \underline{-3} \end{array}$$

$$\begin{array}{r} \text{m)} \quad 10 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{n)} \quad 9 \\ \underline{-9} \end{array}$$

$$\begin{array}{r} \text{o)} \quad 12 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{p)} \quad 11 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{q)} \quad 12 \\ \underline{-9} \end{array}$$

$$\begin{array}{r} \text{r)} \quad 11 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{s)} \quad 10 \\ \underline{-4} \end{array}$$

$$\begin{array}{r} \text{t)} \quad 8 \\ \underline{-4} \end{array}$$

$$\begin{array}{r} \text{u)} \quad 9 \\ \underline{-4} \end{array}$$

$$\begin{array}{r} \text{v)} \quad 11 \\ \underline{-8} \end{array}$$

$$\begin{array}{r} \text{w)} \quad 12 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{x)} \quad 8 \\ \underline{-5} \end{array}$$

Answers to Exercise Five

a) 9	b) 3	c) 2	d) 5	e) 0	f) 7	g) 8
h) 1	i) 1	j) 6	k) 2	l) 8	m) 8	n) 0
o) 6	p) 9	q) 3	r) 5	s) 6	t) 4	u) 5
v) 3	w) 10	x) 3				

Exercise Six

Check out your **subtraction facts** by doing this exercise as quickly as you can. Use your addition facts to help find the subtraction facts. Check your work using the answer key at the end of the exercise. Then, make a list of any subtraction facts you do not know or which are slow for you and practice them.

a)
$$\begin{array}{r} 11 \\ -7 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 12 \\ -6 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 10 \\ -9 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 8 \\ -3 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 12 \\ -5 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 10 \\ -4 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 9 \\ -7 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 7 \\ -3 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 8 \\ -4 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 11 \\ -9 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 6 \\ -5 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 7 \\ -2 \\ \hline \end{array}$$

m)
$$\begin{array}{r} 10 \\ -7 \\ \hline \end{array}$$

n)
$$\begin{array}{r} 9 \\ -6 \\ \hline \end{array}$$

o)
$$\begin{array}{r} 12 \\ -8 \\ \hline \end{array}$$

p)
$$\begin{array}{r} 9 \\ -2 \\ \hline \end{array}$$

q)
$$\begin{array}{r} 11 \\ -4 \\ \hline \end{array}$$

r)
$$\begin{array}{r} 10 \\ -2 \\ \hline \end{array}$$

s)
$$\begin{array}{r} 12 \\ -7 \\ \hline \end{array}$$

t)
$$\begin{array}{r} 7 \\ -5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 11 \\ -6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 12 \\ -9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 10 \\ -3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 7 \\ -6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{y)} \quad 10 \\ -6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{z)} \quad 8 \\ -2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 11 \\ -5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 9 \\ -1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{cc)} \quad 10 \\ -5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{dd)} \quad 12 \\ -3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{ee)} \quad 9 \\ -4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{ff)} \quad 11 \\ -3 \\ \hline \end{array}$$

Answers to Exercise Six

a) 4	b) 6	c) 1	d) 5	e) 7	f) 6	g) 2
h) 4	i) 4	j) 2	k) 1	l) 5	m) 3	n) 3
o) 4	p) 7	q) 7	r) 8	s) 5	t) 2	u) 5
v) 3	w) 7	x) 1	y) 4	z) 6	aa) 6	bb) 8
cc) 5	dd) 9	ee) 5	ff) 8			

Need more practice?

Practice your subtraction facts using dominoes. Place all the dominoes face down.

Flip over two dominoes and subtract.

Exercise Seven

Check out your **subtraction facts** by doing this exercise as quickly as you can. Use your addition facts to help find the subtraction facts. Check your work using the answer key at the end of the exercise. Then, make a list of any subtraction facts you do not know or which are slow for you and practice them.

a)
$$\begin{array}{r} 13 \\ -5 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 10 \\ -1 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 9 \\ -4 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 5 \\ -4 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 9 \\ -9 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 16 \\ -8 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 11 \\ -7 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 6 \\ -3 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 18 \\ -9 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 7 \\ -2 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 13 \\ -7 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 8 \\ -6 \\ \hline \end{array}$$

m)
$$\begin{array}{r} 4 \\ -3 \\ \hline \end{array}$$

n)
$$\begin{array}{r} 14 \\ -5 \\ \hline \end{array}$$

o)
$$\begin{array}{r} 2 \\ -0 \\ \hline \end{array}$$

p)
$$\begin{array}{r} 17 \\ -8 \\ \hline \end{array}$$

q)
$$\begin{array}{r} 14 \\ -6 \\ \hline \end{array}$$

r)
$$\begin{array}{r} 16 \\ -7 \\ \hline \end{array}$$

s)
$$\begin{array}{r} 12 \\ -4 \\ \hline \end{array}$$

t)
$$\begin{array}{r} 3 \\ -0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 5 \\ -2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 13 \\ -6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 10 \\ -7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 8 \\ -8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{y)} \quad 13 \\ -9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{z)} \quad 7 \\ -5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 15 \\ -7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 12 \\ -9 \\ \hline \end{array}$$

Answers to Exercise Seven

a) 8	b) 9	c) 5	d) 1	e) 0	f) 8	g) 4
h) 3	i) 9	j) 5	k) 6	l) 2	m) 1	n) 9
o) 2	p) 9	q) 8	r) 9	s) 8	t) 3	u) 3
v) 7	w) 3	x) 0	y) 4	z) 2	aa) 8	bb) 3

Exercise Eight

Check out your **subtraction facts** by doing this exercise as quickly as you can. Use your addition facts to help find the subtraction facts. Check your work using the answer key at the end of the exercise. Then, make a list of any subtraction facts you do not know or which are slow for you and practice them.

$$\begin{array}{r} \text{a)} \quad 12 \\ -3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b)} \quad 6 \\ -2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c)} \quad 10 \\ -4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d)} \quad 11 \\ -9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{e)} \quad 1 \\ \underline{-0} \end{array}$$

$$\begin{array}{r} \text{f)} \quad 8 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{g)} \quad 12 \\ \underline{-5} \end{array}$$

$$\begin{array}{r} \text{h)} \quad 11 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{i)} \quad 3 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{j)} \quad 11 \\ \underline{-8} \end{array}$$

$$\begin{array}{r} \text{k)} \quad 14 \\ \underline{-7} \end{array}$$

$$\begin{array}{r} \text{l)} \quad 8 \\ \underline{-3} \end{array}$$

$$\begin{array}{r} \text{m)} \quad 15 \\ \underline{-9} \end{array}$$

$$\begin{array}{r} \text{n)} \quad 9 \\ \underline{-7} \end{array}$$

$$\begin{array}{r} \text{o)} \quad 7 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{p)} \quad 11 \\ \underline{-5} \end{array}$$

$$\begin{array}{r} \text{q)} \quad 12 \\ \underline{-7} \end{array}$$

$$\begin{array}{r} \text{r)} \quad 10 \\ \underline{-8} \end{array}$$

$$\begin{array}{r} \text{s)} \quad 8 \\ \underline{-7} \end{array}$$

$$\begin{array}{r} \text{t)} \quad 6 \\ \underline{-5} \end{array}$$

$$\begin{array}{r} \text{u)} \quad 9 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{v)} \quad 7 \\ \underline{-3} \end{array}$$

$$\begin{array}{r} \text{w)} \quad 10 \\ \underline{-0} \end{array}$$

$$\begin{array}{r} \text{x)} \quad 9 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{y)} \quad 16 \\ \underline{-7} \end{array}$$

$$\begin{array}{r} \text{z)} \quad 9 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 9 \\ \underline{-0} \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 8 \\ \underline{-4} \end{array}$$

Answers to Exercise Eight

a) 9	b) 4	c) 6	d) 2	e) 1	f) 7	g) 7
h) 9	i) 1	j) 3	k) 7	l) 5	m) 6	n) 2
o) 6	p) 6	q) 5	r) 2	s) 1	t) 1	u) 3
v) 4	w) 10	x) 8	y) 9	z) 7	aa) 9	bb) 4

Exercise Nine

Check out your **subtraction facts** by doing this exercise as quickly as you can. Use your addition facts to help find the subtraction facts. Check your work using the answer key at the end of the exercise. Then, make a list of any subtraction facts you do not know or which are slow for you and practice them.

a)
$$\begin{array}{r} 1 \\ -1 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 7 \\ -6 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 12 \\ -3 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 5 \\ -0 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 11 \\ -3 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 4 \\ -1 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 8 \\ -0 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 14 \\ -9 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 6 \\ -6 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 12 \\ -8 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 9 \\ -3 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 2 \\ -1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m)} \quad 17 \\ \underline{-9} \end{array}$$

$$\begin{array}{r} \text{n)} \quad 6 \\ \underline{-0} \end{array}$$

$$\begin{array}{r} \text{o)} \quad 13 \\ \underline{-4} \end{array}$$

$$\begin{array}{r} \text{p)} \quad 4 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{q)} \quad 2 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{r)} \quad 10 \\ \underline{-3} \end{array}$$

$$\begin{array}{r} \text{s)} \quad 7 \\ \underline{-7} \end{array}$$

$$\begin{array}{r} \text{t)} \quad 5 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{u)} \quad 15 \\ \underline{-8} \end{array}$$

$$\begin{array}{r} \text{v)} \quad 3 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{w)} \quad 16 \\ \underline{-9} \end{array}$$

$$\begin{array}{r} \text{x)} \quad 9 \\ \underline{-5} \end{array}$$

$$\begin{array}{r} \text{y)} \quad 13 \\ \underline{-8} \end{array}$$

$$\begin{array}{r} \text{z)} \quad 7 \\ \underline{-4} \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 12 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 4 \\ \underline{-0} \end{array}$$

Answers to Exercise Nine

a) 0	b) 1	c) 9	d) 5	e) 8	f) 3	g) 8
h) 5	i) 0	j) 4	k) 6	l) 1	m) 8	n) 6
o) 9	p) 2	q) 0	r) 7	s) 0	t) 4	u) 7
v) 2	w) 7	x) 4	y) 5	z) 3	aa) 6	bb) 4

Exercise Ten

Check out your **subtraction facts** by doing this exercise as quickly as you can. Use your addition facts to help find the subtraction facts. Check your work using the answer key at the end of the exercise. Then, make a list of any subtraction facts you do not know or which are slow for you and practice them.

a)
$$\begin{array}{r} 15 \\ -6 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 3 \\ -3 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 6 \\ -4 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 11 \\ -4 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 5 \\ -5 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 10 \\ -2 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 6 \\ -1 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 14 \\ -8 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 12 \\ -3 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 8 \\ -2 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 4 \\ -4 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 7 \\ -0 \\ \hline \end{array}$$

m)
$$\begin{array}{r} 11 \\ -6 \\ \hline \end{array}$$

n)
$$\begin{array}{r} 5 \\ -3 \\ \hline \end{array}$$

o)
$$\begin{array}{r} 8 \\ -5 \\ \hline \end{array}$$

p)
$$\begin{array}{r} 10 \\ -9 \\ \hline \end{array}$$

q)
$$\begin{array}{r} 16 \\ -7 \\ \hline \end{array}$$

r)
$$\begin{array}{r} 9 \\ -8 \\ \hline \end{array}$$

s)
$$\begin{array}{r} 7 \\ -2 \\ \hline \end{array}$$

t)
$$\begin{array}{r} 4 \\ -3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 13 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{v)} \quad 2 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{w)} \quad 9 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{x)} \quad 17 \\ \underline{-8} \end{array}$$

$$\begin{array}{r} \text{y)} \quad 14 \\ \underline{-5} \end{array}$$

$$\begin{array}{r} \text{z)} \quad 1 \\ \underline{-0} \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 12 \\ \underline{-8} \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 3 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{cc)} \quad 8 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{dd)} \quad 10 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{ee)} \quad 13 \\ \underline{-4} \end{array}$$

$$\begin{array}{r} \text{ff)} \quad 7 \\ \underline{-4} \end{array}$$

Answers to Exercise Ten

a) 9	b) 0	c) 2	d) 7	e) 0	f) 8	g) 5
h) 6	i) 9	j) 6	k) 0	l) 7	m) 5	n) 2
o) 3	p) 1	q) 9	r) 1	s) 5	t) 1	u) 7
v) 0	w) 7	x) 9	y) 9	z) 1	aa) 4	bb) 2
cc) 2	dd) 4	ee) 9	ff) 3			

Exercise Eleven

Check out your **subtraction facts** by doing this exercise as quickly as you can. Use your addition facts to help find the subtraction facts. Check your work using the answer key at the end of the exercise. Then, make a list of any subtraction facts you do not know or which are slow for you and practice them.

a)
$$\begin{array}{r} 18 \\ -9 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 1 \\ -1 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 3 \\ -0 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 14 \\ -7 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 8 \\ -3 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 12 \\ -5 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 6 \\ -4 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 15 \\ -7 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 11 \\ -3 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 5 \\ -1 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 6 \\ -0 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 10 \\ -9 \\ \hline \end{array}$$

m)
$$\begin{array}{r} 5 \\ -3 \\ \hline \end{array}$$

n)
$$\begin{array}{r} 11 \\ -7 \\ \hline \end{array}$$

o)
$$\begin{array}{r} 4 \\ -0 \\ \hline \end{array}$$

p)
$$\begin{array}{r} 15 \\ -9 \\ \hline \end{array}$$

q)
$$\begin{array}{r} 16 \\ -8 \\ \hline \end{array}$$

r)
$$\begin{array}{r} 7 \\ -5 \\ \hline \end{array}$$

s)
$$\begin{array}{r} 10 \\ -2 \\ \hline \end{array}$$

t)
$$\begin{array}{r} 6 \\ -3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 13 \\ \underline{-8} \end{array}$$

$$\begin{array}{r} \text{v)} \quad 9 \\ \underline{-4} \end{array}$$

$$\begin{array}{r} \text{w)} \quad 2 \\ \underline{-0} \end{array}$$

$$\begin{array}{r} \text{x)} \quad 8 \\ \underline{-5} \end{array}$$

$$\begin{array}{r} \text{y)} \quad 10 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{z)} \quad 5 \\ \underline{-5} \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 11 \\ \underline{-5} \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 12 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{cc)} \quad 8 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{dd)} \quad 7 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{ee)} \quad 11 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{ff)} \quad 9 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{gg)} \quad 12 \\ \underline{-3} \end{array}$$

$$\begin{array}{r} \text{hh)} \quad 8 \\ \underline{-0} \end{array}$$

$$\begin{array}{r} \text{ii)} \quad 10 \\ \underline{-7} \end{array}$$

$$\begin{array}{r} \text{jj)} \quad 6 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{kk)} \quad 14 \\ \underline{-9} \end{array}$$

$$\begin{array}{r} \text{ll)} \quad 10 \\ \underline{-3} \end{array}$$

$$\begin{array}{r} \text{mm)} \quad 8 \\ \underline{-7} \end{array}$$

$$\begin{array}{r} \text{nn)} \quad 7 \\ \underline{-0} \end{array}$$

Answers to Exercise Eleven

a) 9	b) 0	c) 3	d) 7	e) 5	f) 7	g) 2
h) 8	i) 8	j) 4	k) 6	l) 1	m) 2	n) 4
o) 4	p) 6	q) 8	r) 2	s) 8	t) 3	u) 5
v) 5	w) 2	x) 3	y) 9	z) 0	aa) 6	bb) 6
cc) 6	dd) 6	ee) 9	ff) 3	gg) 9	hh) 8	ii) 3
jj) 0	kk) 5	ll) 7	mm) 1	nn) 7		

Need some extra practice?

- Find a partner and play this card game.
- Using a regular deck of cards, a jack will be eleven, a queen will be twelve and a king will be thirteen.
- Shuffle the cards and deal them out. Keep your cards in a pile in front of you.
- Each player flips over a card.
- Take turns subtracting the numbers on the cards. If the person gets the right answer that person gets to keep the cards. If the person gets the wrong answer the other player gets the cards.
- The person who collects all the cards is the winner.
- You could also set a time limit and the person with the most cards when time is up is the winner.

Exercise Twelve

Check out your subtraction facts by doing this exercise as quickly as you can. Use your addition facts to help find the subtraction facts. Check your work using the answer key at the end of the exercise. Then, make a list of any subtraction facts you do not know or which are slow for you and practice them.

a)
$$\begin{array}{r} 5 \\ -2 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 9 \\ -1 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 12 \\ -4 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 4 \\ -2 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 17 \\ -9 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 2 \\ -1 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 11 \\ -9 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 7 \\ -7 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 14 \\ -6 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 16 \\ -9 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 9 \\ -3 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 8 \\ -1 \\ \hline \end{array}$$

m)
$$\begin{array}{r} 9 \\ -0 \\ \hline \end{array}$$

n)
$$\begin{array}{r} 14 \\ -8 \\ \hline \end{array}$$

o)
$$\begin{array}{r} 10 \\ -5 \\ \hline \end{array}$$

p)
$$\begin{array}{r} 15 \\ -8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 12 \\ \underline{-9} \end{array}$$

$$\begin{array}{r} \text{r)} \quad 13 \\ \underline{-5} \end{array}$$

$$\begin{array}{r} \text{s)} \quad 6 \\ \underline{-5} \end{array}$$

$$\begin{array}{r} \text{t)} \quad 5 \\ \underline{-0} \end{array}$$

$$\begin{array}{r} \text{u)} \quad 13 \\ \underline{-9} \end{array}$$

$$\begin{array}{r} \text{v)} \quad 8 \\ \underline{-4} \end{array}$$

$$\begin{array}{r} \text{w)} \quad 10 \\ \underline{-0} \end{array}$$

$$\begin{array}{r} \text{x)} \quad 7 \\ \underline{-3} \end{array}$$

$$\begin{array}{r} \text{y)} \quad 11 \\ \underline{-8} \end{array}$$

$$\begin{array}{r} \text{z)} \quad 9 \\ \underline{-9} \end{array}$$

$$\begin{array}{r} \text{aa)} \quad 6 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{bb)} \quad 4 \\ \underline{-4} \end{array}$$

$$\begin{array}{r} \text{cc)} \quad 13 \\ \underline{-7} \end{array}$$

$$\begin{array}{r} \text{dd)} \quad 3 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{ee)} \quad 11 \\ \underline{-4} \end{array}$$

$$\begin{array}{r} \text{ff)} \quad 5 \\ \underline{-4} \end{array}$$

$$\begin{array}{r} \text{gg)} \quad 11 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{hh)} \quad 9 \\ \underline{-5} \end{array}$$

$$\begin{array}{r} \text{ii)} \quad 6 \\ \underline{-2} \end{array}$$

$$\begin{array}{r} \text{jj)} \quad 3 \\ \underline{-3} \end{array}$$

$$\begin{array}{r} \text{kk)} \quad 4 \\ \underline{-1} \end{array}$$

$$\begin{array}{r} \text{ll)} \quad 7 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{mm)} \quad 10 \\ \underline{-4} \end{array}$$

$$\begin{array}{r} \text{nn)} \quad 12 \\ \underline{-7} \end{array}$$

$$\begin{array}{r} \text{oo)} \quad 15 \\ \underline{-6} \end{array}$$

$$\begin{array}{r} \text{pp)} \quad 10 \\ \underline{-8} \end{array}$$

$$\begin{array}{r} \text{qq)} \quad 9 \\ \underline{-7} \end{array}$$

$$\begin{array}{r} \text{rr)} \quad 8 \\ \underline{-8} \end{array}$$

Answers to Exercise Twelve

a) 3	b) 8	c) 8	d) 2	e) 6	f) 1	g) 2
h) 0	i) 8	j) 7	k) 6	l) 7	m) 9	n) 6
o) 5	p) 7	q) 3	r) 8	s) 1	t) 5	u) 4
v) 4	w) 10	x) 4	y) 3	z) 0	aa) 5	bb) 0
cc) 6	dd) 1	ee) 7	ff) 1	gg) 5	hh) 4	ii) 4
jj) 0	kk) 3	ll) 1	mm) 6	nn) 5	oo) 9	pp) 2
qq) 2	rr) 0					

Emotions Check

How are you feeling? Are your palms moist? How is your breathing?

Take control. Be the boss. If you are feeling anxious, practice your breathing exercise.

Remember: breathe in slowly to the count of four, hold it for the count of four and breathe out slowly to the count of four.

Subtracting Across

So far you have only been subtracting numbers when they are **up and down** or **vertical**.

Example:

$$\begin{array}{r} 9 \\ -5 \\ \hline 4 \end{array}$$

Another way to subtract numbers is **across** or **horizontally**.

Example: $9 - 5 = 4$

When you subtract numbers across, you work from left to right.

Exercise One

Practice subtracting **across or horizontally**. Check your work using the answer key at the end of the exercise.

a) $6 - 3 =$

b) $12 - 8 =$

c) $4 - 1 =$

d) $8 - 6 =$

e) $18 - 9 =$

f) $11 - 4 =$

g) $7 - 2 =$

h) $16 - 7 =$

i) $10 - 5 =$

j) $2 - 0 =$

k) $9 - 5 =$

l) $17 - 8 =$

m) $5 - 3 =$

n) $14 - 9 =$

o) $15 - 6 =$

p) $3 - 1 =$

q) $13 - 7 =$

r) $1 - 0 =$

s) $10 - 4 =$

t) $6 - 2 =$

Answers to Exercise One

a) 3	b) 4	c) 3	d) 2	e) 9	f) 7	g) 5
h) 9	i) 5	j) 2	k) 4	l) 9	m) 2	n) 5
o) 9	p) 2	q) 6	r) 1	s) 6	t) 4	

Exercise Two

Practice subtracting **across or horizontally**. Check your work using the answer key at the end of the exercise

a) $9 - 6 =$

b) $14 - 5 =$

c) $8 - 4 =$

d) $7 - 1 =$

e) $11 - 7 =$

f) $5 - 0 =$

g) $4 - 3 =$

h) $15 - 8 =$

i) $11 - 9 =$

j) $10 - 2 =$

k) $9 - 2 =$

l) $8 - 3 =$

m) $13 - 5 =$

n) $12 - 6 =$

o) $10 - 7 =$

p) $7 - 4 =$

q) $5 - 1 =$

r) $16 - 8 =$

s) $10 - 9 =$

t) $6 - 0 =$

Answers to Exercise Two

a) 3	b) 9	c) 4	d) 6	e) 4	f) 5	g) 1
h) 7	i) 2	j) 8	k) 7	l) 5	m) 8	n) 6
o) 3	p) 3	q) 4	r) 8	s) 1	t) 6	

Exercise Three

Practice subtracting across or horizontally. Check your work using the answer key at the end of the exercise

a) $3 - 2 =$

b) $17 - 9 =$

c) $14 - 7 =$

d) $9 - 3 =$

e) $12 - 5 =$

f) $8 - 8 =$

g) $6 - 1 =$

h) $13 - 4 =$

i) $11 - 6 =$

j) $4 - 0 =$

k) $8 - 1 =$

l) $16 - 9 =$

m) $7 - 0 =$

n) $13 - 8 =$

o) $12 - 3 =$

p) $9 - 4 =$

q) $15 - 7 =$

r) $10 - 6 =$

s) $11 - 5 =$

t) $5 - 2 =$

Answers to Exercise Three

a) 1	b) 8	c) 7	d) 6	e) 7	f) 0	g) 5
h) 9	i) 5	j) 4	k) 7	l) 7	m) 7	n) 5
o) 9	p) 5	q) 8	r) 4	s) 6	t) 3	

Word Problems

Learning subtraction facts is very important because once you know them all they become a tool to use when solving problems.

Words such as **less than**, **minus**, **subtracted from**, **how many more**, **how much more**, and **difference** tell you to subtract the numbers. Look for these words when reading word problems and underline them before trying to solve a problem. Circle the information that is given.

Example: There were 14 nails in a box. Lu used 7 of them. How many nails were still in the box?

There were 14 nails in a box. Lu used 7 of them. How many nails were still in the box?

You have circled 14 nails and 7. This is the information you will use to find the answer.

You have underlined “How many”. These words tell you to subtract.

$$\begin{array}{r} 14 \text{ nails} \\ - 7 \text{ nails} \\ \hline 7 \text{ nails} \end{array}$$

Exercise One

Solve each of the following word problems. Be sure to underline the words that tell you to subtract. Circle the information that is given. Check your work using the answer key at the end of the exercise. Have your instructor check your underlining and circling.

- a) Wolfgang walked 11 blocks. Ingrid walked 6 blocks. Wolfgang walked how much farther than Ingrid?

- b) Mika and her father went fishing. Mika caught 18 fish and her father caught 9 fish. How many more fish did Mika catch?
- c) Kuan-Lin was making moon cakes for the class party. She needed 15 cakes for the party. On Monday she had made 7 moon cakes. How many moon cakes did she still need to make?
- d) Malik counted 12 cars in the parking lot where he worked. One hour later, he counted only 4 cars. How many cars left?
- e) There were 17 chairs in a room. Eight of them were being used. How many chairs were not being used?

- f) Amelie had \$12 in her wallet. She bought a latté for \$4. Find the difference.

Answers to Exercise One

- a) 5 blocks b) 9 fish c) 8 moon cakes
d) 8 cars e) 9 chairs f) \$8

A. Find the differences. Be sure to check your answers.**9 marks**

a)
$$\begin{array}{r} 16 \\ -8 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 18 \\ -9 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 14 \\ -8 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 11 \\ -4 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 9 \\ -3 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 17 \\ -9 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 10 \\ -6 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 7 \\ -5 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 15 \\ -6 \\ \hline \end{array}$$

B. Find the differences. Be sure to check your answers.**6 marks**

a) $10 - 6 =$

b) $7 - 5 =$

c) $15 - 9 =$

d) $9 - 4 =$

e) $11 - 3 =$

f) $10 - 7 =$

C. **Solve each of the following word problems.** **6 marks**
Be sure to include the unit of measure in your answer. **(2 marks each)**
Be sure to circle information and underline what is being asked.

a) Shada caught 17 fish. She gave 8 fish to her grandmother. How many fish did she have left?

b) Yuan went to the store with \$15 to buy some rice. The rice cost \$6. How much did he have left?

c) Carlo had 13 metres of fencing. He used 8 metres around his flower garden. How many metres did he have left?

Answers to Topic A Self-Test

A.

- a) 8 b) 9 c) 6 d) 7 e) 6 f) 8
g) 4 h) 2 i) 9

B.

- a) 4 b) 2 c) 6 d) 5 e) 8 f) 3

C.

- a) 9 fish b) \$9 c) 5 metres

Topic B: Subtraction of Larger Numbers

You can find the difference between two large numbers using the basic subtraction facts you have been practicing. Always **take away** or subtract the **number after the minus sign**.

Use these steps to complete each subtraction question.

Step 1: Subtract the ones from the ones.

Step 2: Subtract the tens from the tens.

Step 3: Subtract the hundreds from the hundreds.

Example A:

$$\begin{array}{r} 57 \\ - 26 \\ \hline \end{array}$$

Step 1: Subtract the ones from the ones. 7 ones – 6 ones = 1 one

$$\begin{array}{r} 57 \\ - 26 \\ \hline 1 \end{array}$$

Write the answer in line with the ones in the question.

Step 2: Subtract the tens from the tens. 5 tens – 2 tens = 3 tens

$$\begin{array}{r} 57 \\ - 26 \\ \hline 31 \end{array}$$

The **difference** between 57 and 26 is **31**.

Example B:

$$\begin{array}{r} 628 \\ - 524 \\ \hline \end{array}$$

Step 1: Subtract the ones from the ones. 8 ones – 4 ones = 4 ones

$$\begin{array}{r} 628 \\ - 524 \\ \hline 4 \end{array}$$

Write the answer in line with the ones in the question.

Step 2: Subtract the tens. 2 tens – 2 tens = 0 tens

$$\begin{array}{r} 628 \\ - 524 \\ \hline 04 \end{array}$$

Write the answer in line with the tens in the question.

The **0** must be placed in the answer to hold the tens place.

Step 3: Subtract the hundreds. 6 hundreds – 5 hundreds = 1 hundred

$$\begin{array}{r} 628 \\ - 524 \\ \hline 104 \end{array}$$

Write the answer in line with the hundreds in the question.

The **difference** between 628 and 524 is **104**.

Exercise One

Find the differences. Check your work using the answer key at the end of the exercise.

$$\begin{array}{r} \text{a)} \quad 87 \\ -36 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b)} \quad 29 \\ -21 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c)} \quad 48 \\ -40 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d)} \quad 99 \\ -63 \\ \hline \end{array}$$

$$\begin{array}{r} \text{e)} \quad 75 \\ -45 \\ \hline \end{array}$$

$$\begin{array}{r} \text{f)} \quad 73 \\ -20 \\ \hline \end{array}$$

$$\begin{array}{r} \text{g)} \quad 92 \\ -21 \\ \hline \end{array}$$

$$\begin{array}{r} \text{h)} \quad 58 \\ -27 \\ \hline \end{array}$$

$$\begin{array}{r} \text{i)} \quad 84 \\ -23 \\ \hline \end{array}$$

$$\begin{array}{r} \text{j)} \quad 69 \\ -38 \\ \hline \end{array}$$

$$\begin{array}{r} \text{k)} \quad 45 \\ -23 \\ \hline \end{array}$$

$$\begin{array}{r} \text{l)} \quad 49 \\ -19 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m)} \quad 59 \\ -14 \\ \hline \end{array}$$

$$\begin{array}{r} \text{n)} \quad 87 \\ -63 \\ \hline \end{array}$$

$$\begin{array}{r} \text{o)} \quad 88 \\ -15 \\ \hline \end{array}$$

$$\begin{array}{r} \text{p)} \quad 56 \\ -44 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 96 \\ -75 \\ \hline \end{array}$$

$$\begin{array}{r} \text{r)} \quad 37 \\ -17 \\ \hline \end{array}$$

$$\begin{array}{r} \text{s)} \quad 70 \\ -50 \\ \hline \end{array}$$

$$\begin{array}{r} \text{t)} \quad 38 \\ -24 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 31 \\ -10 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 27 \\ -12 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 74 \\ -53 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 45 \\ -20 \\ \hline \end{array}$$

Answers to Exercise One

a) 51	b) 8	c) 8	d) 36	e) 30	f) 53	g) 71
h) 31	i) 61	j) 31	k) 22	l) 30	m) 45	n) 24
o) 73	p) 12	q) 21	r) 20	s) 20	t) 14	u) 21
v) 15	w) 21	x) 25				

Exercise Two

Find the differences. Check your work using the answer key at the end of the exercise.

$$\begin{array}{r} \text{a)} \quad 46 \\ -23 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b)} \quad 65 \\ -42 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c)} \quad 45 \\ -13 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d)} \quad 53 \\ -20 \\ \hline \end{array}$$

$$\begin{array}{r} \text{e)} \quad 34 \\ -21 \\ \hline \end{array}$$

$$\begin{array}{r} \text{f)} \quad 48 \\ -32 \\ \hline \end{array}$$

$$\begin{array}{r} \text{g)} \quad 56 \\ -13 \\ \hline \end{array}$$

$$\begin{array}{r} \text{h)} \quad 26 \\ -15 \\ \hline \end{array}$$

$$\begin{array}{r} \text{i)} \quad 49 \\ -22 \\ \hline \end{array}$$

$$\begin{array}{r} \text{j)} \quad 58 \\ -27 \\ \hline \end{array}$$

$$\begin{array}{r} \text{k)} \quad 95 \\ -71 \\ \hline \end{array}$$

$$\begin{array}{r} \text{l)} \quad 37 \\ -14 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m)} \quad 69 \\ -19 \\ \hline \end{array}$$

$$\begin{array}{r} \text{n)} \quad 86 \\ -71 \\ \hline \end{array}$$

$$\begin{array}{r} \text{o)} \quad 99 \\ -50 \\ \hline \end{array}$$

$$\begin{array}{r} \text{p)} \quad 89 \\ -55 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 97 \\ \quad \underline{-13} \end{array}$$

$$\begin{array}{r} \text{r)} \quad 87 \\ \quad \underline{-25} \end{array}$$

$$\begin{array}{r} \text{s)} \quad 48 \\ \quad \underline{-26} \end{array}$$

$$\begin{array}{r} \text{t)} \quad 36 \\ \quad \underline{-11} \end{array}$$

$$\begin{array}{r} \text{u)} \quad 46 \\ \quad \underline{-12} \end{array}$$

$$\begin{array}{r} \text{v)} \quad 86 \\ \quad \underline{-43} \end{array}$$

$$\begin{array}{r} \text{w)} \quad 59 \\ \quad \underline{-32} \end{array}$$

$$\begin{array}{r} \text{x)} \quad 84 \\ \quad \underline{-14} \end{array}$$

Answers to Exercise Two

a) 23	b) 23	c) 32	d) 33	e) 13	f) 16	g) 43
h) 11	i) 27	j) 31	k) 24	l) 23	m) 50	n) 15
o) 49	p) 34	q) 84	r) 62	s) 22	t) 25	u) 34
v) 43	w) 27	x) 70				

Exercise Three

Find the differences. Check your work using the answer key at the end of the exercise.

$$\begin{array}{r} \text{a)} \quad 23 \\ \quad \underline{-11} \end{array}$$

$$\begin{array}{r} \text{b)} \quad 53 \\ \quad \underline{-21} \end{array}$$

$$\begin{array}{r} \text{c)} \quad 32 \\ \quad \underline{-20} \end{array}$$

$$\begin{array}{r} \text{d)} \quad 77 \\ \quad \underline{-32} \end{array}$$

$$\begin{array}{r} \text{e)} \quad 31 \\ \quad \underline{-21} \end{array}$$

$$\begin{array}{r} \text{f)} \quad 38 \\ \quad \underline{-15} \end{array}$$

$$\begin{array}{r} \text{g)} \quad 33 \\ \quad \underline{-13} \end{array}$$

$$\begin{array}{r} \text{h)} \quad 92 \\ \quad \underline{-30} \end{array}$$

$$\begin{array}{r} \text{i)} \quad 94 \\ \quad \underline{-23} \end{array}$$

$$\begin{array}{r} \text{j)} \quad 54 \\ \quad \underline{-42} \end{array}$$

$$\begin{array}{r} \text{k)} \quad 74 \\ \quad \underline{-33} \end{array}$$

$$\begin{array}{r} \text{l)} \quad 88 \\ \quad \underline{-72} \end{array}$$

$$\begin{array}{r} \text{m)} \quad 46 \\ \quad \underline{-36} \end{array}$$

$$\begin{array}{r} \text{n)} \quad 75 \\ \quad \underline{-41} \end{array}$$

$$\begin{array}{r} \text{o)} \quad 85 \\ \quad \underline{-12} \end{array}$$

$$\begin{array}{r} \text{p)} \quad 56 \\ \quad \underline{-45} \end{array}$$

$$\begin{array}{r} \text{q)} \quad 64 \\ \quad \underline{-22} \end{array}$$

$$\begin{array}{r} \text{r)} \quad 27 \\ \quad \underline{-15} \end{array}$$

$$\begin{array}{r} \text{s)} \quad 76 \\ \quad \underline{-53} \end{array}$$

$$\begin{array}{r} \text{t)} \quad 63 \\ \quad \underline{-41} \end{array}$$

$$\begin{array}{r} \text{u)} \quad 52 \\ \quad \underline{-41} \end{array}$$

$$\begin{array}{r} \text{v)} \quad 57 \\ \quad \underline{-44} \end{array}$$

$$\begin{array}{r} \text{w)} \quad 69 \\ \quad \underline{-46} \end{array}$$

$$\begin{array}{r} \text{x)} \quad 77 \\ \quad \underline{-42} \end{array}$$

Answers to Exercise Three

a) 12	b) 32	c) 12	d) 45	e) 10	f) 23	g) 20
h) 62	i) 71	j) 12	k) 41	l) 16	m) 10	n) 34
o) 73	p) 11	q) 42	r) 12	s) 23	t) 22	u) 11
v) 13	w) 23	x) 35				

Exercise Four

Find the differences. Check your work using the answer key at the end of the exercise.

$$\begin{array}{r} \text{a)} \quad 476 \\ -413 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b)} \quad 873 \\ -560 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c)} \quad 589 \\ -384 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d)} \quad 793 \\ -170 \\ \hline \end{array}$$

$$\begin{array}{r} \text{e)} \quad 228 \\ -123 \\ \hline \end{array}$$

$$\begin{array}{r} \text{f)} \quad 995 \\ -452 \\ \hline \end{array}$$

$$\begin{array}{r} \text{g)} \quad 896 \\ -450 \\ \hline \end{array}$$

$$\begin{array}{r} \text{h)} \quad 769 \\ -405 \\ \hline \end{array}$$

$$\begin{array}{r} \text{i)} \quad 788 \\ -435 \\ \hline \end{array}$$

$$\begin{array}{r} \text{j)} \quad 579 \\ -234 \\ \hline \end{array}$$

$$\begin{array}{r} \text{k)} \quad 958 \\ -403 \\ \hline \end{array}$$

$$\begin{array}{r} \text{l)} \quad 696 \\ -251 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m)} \quad 657 \\ -234 \\ \hline \end{array}$$

$$\begin{array}{r} \text{n)} \quad 745 \\ -412 \\ \hline \end{array}$$

$$\begin{array}{r} \text{o)} \quad 967 \\ -143 \\ \hline \end{array}$$

$$\begin{array}{r} \text{p)} \quad 456 \\ -214 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 627 \\ -512 \\ \hline \end{array}$$

$$\begin{array}{r} \text{r)} \quad 878 \\ -425 \\ \hline \end{array}$$

$$\begin{array}{r} \text{s)} \quad 357 \\ -130 \\ \hline \end{array}$$

$$\begin{array}{r} \text{t)} \quad 725 \\ -214 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 678 \\ -623 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 526 \\ -116 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 724 \\ -221 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 429 \\ -316 \\ \hline \end{array}$$

Answers to Exercise Four

a) 63	b) 313	c) 205	d) 623	e) 105	f) 543	g) 446
h) 364	i) 353	j) 345	k) 555	l) 445	m) 423	n) 333
o) 824	p) 242	q) 115	r) 453	s) 227	t) 511	u) 55
v) 410	w) 503	x) 113				

Exercise Five

Find the differences. Check your work using the answer key at the end of the exercise.

a)
$$\begin{array}{r} 543 \\ -132 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 752 \\ -150 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 328 \\ -115 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 758 \\ -341 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 587 \\ -425 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 857 \\ -143 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 545 \\ -302 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 466 \\ -115 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 964 \\ -231 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 679 \\ -424 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 757 \\ -136 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 467 \\ -132 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m)} \quad 536 \\ -325 \\ \hline \end{array}$$

$$\begin{array}{r} \text{n)} \quad 897 \\ -287 \\ \hline \end{array}$$

$$\begin{array}{r} \text{o)} \quad 979 \\ -465 \\ \hline \end{array}$$

$$\begin{array}{r} \text{p)} \quad 907 \\ -605 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 496 \\ -144 \\ \hline \end{array}$$

$$\begin{array}{r} \text{r)} \quad 778 \\ -635 \\ \hline \end{array}$$

$$\begin{array}{r} \text{s)} \quad 573 \\ -232 \\ \hline \end{array}$$

$$\begin{array}{r} \text{t)} \quad 859 \\ -734 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 735 \\ -420 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 912 \\ -811 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 966 \\ -732 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 578 \\ -343 \\ \hline \end{array}$$

Answers to Exercise Five

a) 411	b) 602	c) 213	d) 417	e) 162	f) 714	g) 243
h) 351	i) 733	j) 255	k) 621	l) 335	m) 211	n) 610
o) 514	p) 302	q) 352	r) 143	s) 341	t) 125	u) 315
v) 101	w) 234	x) 235				

Exercise Six

Find the differences. Check your work using the answer key at the end of the exercise.

$$\begin{array}{r} \text{a)} \quad 353 \\ -142 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b)} \quad 896 \\ -675 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c)} \quad 786 \\ -325 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d)} \quad 743 \\ -623 \\ \hline \end{array}$$

$$\begin{array}{r} \text{e)} \quad 548 \\ -336 \\ \hline \end{array}$$

$$\begin{array}{r} \text{f)} \quad 685 \\ -143 \\ \hline \end{array}$$

$$\begin{array}{r} \text{g)} \quad 393 \\ -241 \\ \hline \end{array}$$

$$\begin{array}{r} \text{h)} \quad 965 \\ -130 \\ \hline \end{array}$$

$$\begin{array}{r} \text{i)} \quad 478 \\ -352 \\ \hline \end{array}$$

$$\begin{array}{r} \text{j)} \quad 968 \\ -605 \\ \hline \end{array}$$

$$\begin{array}{r} \text{k)} \quad 435 \\ -234 \\ \hline \end{array}$$

$$\begin{array}{r} \text{l)} \quad 694 \\ -523 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m)} \quad 576 \\ -314 \\ \hline \end{array}$$

$$\begin{array}{r} \text{n)} \quad 946 \\ -615 \\ \hline \end{array}$$

$$\begin{array}{r} \text{o)} \quad 664 \\ -532 \\ \hline \end{array}$$

$$\begin{array}{r} \text{p)} \quad 824 \\ -513 \\ \hline \end{array}$$

$$\begin{array}{r} \text{q)} \quad 768 \\ -633 \\ \hline \end{array}$$

$$\begin{array}{r} \text{r)} \quad 497 \\ -335 \\ \hline \end{array}$$

$$\begin{array}{r} \text{s)} \quad 985 \\ -843 \\ \hline \end{array}$$

$$\begin{array}{r} \text{t)} \quad 679 \\ -436 \\ \hline \end{array}$$

$$\begin{array}{r} \text{u)} \quad 598 \\ -365 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad 984 \\ -672 \\ \hline \end{array}$$

$$\begin{array}{r} \text{w)} \quad 569 \\ -238 \\ \hline \end{array}$$

$$\begin{array}{r} \text{x)} \quad 747 \\ -636 \\ \hline \end{array}$$

Answers to Exercise Six

a) 211	b) 221	c) 461	d) 120	e) 212	f) 542	g) 152
h) 835	i) 126	j) 363	k) 201	l) 171	m) 262	n) 331
o) 132	p) 311	q) 135	r) 162	s) 142	t) 243	u) 233
v) 312	w) 331	x) 111				

A. Find the differences. Be sure to check your answers.**6 marks**

a)
$$\begin{array}{r} 59 \\ -33 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 27 \\ -14 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 78 \\ -23 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 93 \\ -81 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 67 \\ -45 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 86 \\ -56 \\ \hline \end{array}$$

B. Find the differences. Be sure to check your answers.**6 marks**

a)
$$\begin{array}{r} 896 \\ -422 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 788 \\ -531 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 467 \\ -126 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 549 \\ -318 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 936 \\ -725 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 654 \\ -242 \\ \hline \end{array}$$

- C. Solve each of the following word problems. 6 marks**
Be sure to include the unit of measure in your answer. (2 marks each)
Be sure to circle information and underline what is being asked.

- a) At noon the temperature was 34 degrees Celsius. At nine o'clock in the evening, it was 12 degrees Celsius. How many degrees did the temperature drop?
- b) Misha's family is on a 179 kilometer trip. They have already gone 123 kilometers. How much farther do they have to go?
- c) The Burj Khalifa in Dubai is one of the tallest buildings in the world at 828 metres. The Eiffel Tower in Paris is 324 metres tall. How much taller is the Burj Khalifa than the Eiffel Tower?

Answers to Topic B Self-Test

A.

- a) 26 b) 13 c) 55 d) 12 e) 22 f) 30

B.

- a) 474 b) 257 c) 341 d) 231 e) 211 f) 412

C.

- a) 22 degrees Celsius b) 56 kilometres c) 504 metres

Unit 3 Review - Subtraction

You will now practice all the skills you learned in Unit 3. Check your work using the answer key at the end of the review.

A. Check out your subtraction facts.

a)
$$\begin{array}{r} 5 \\ -2 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 8 \\ -7 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 3 \\ -1 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 9 \\ -5 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 18 \\ -9 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 11 \\ -4 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 13 \\ -5 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 10 \\ -5 \\ \hline \end{array}$$

i)
$$\begin{array}{r} 6 \\ -6 \\ \hline \end{array}$$

j)
$$\begin{array}{r} 14 \\ -8 \\ \hline \end{array}$$

k)
$$\begin{array}{r} 16 \\ -7 \\ \hline \end{array}$$

l)
$$\begin{array}{r} 12 \\ -9 \\ \hline \end{array}$$

m)
$$\begin{array}{r} 17 \\ -9 \\ \hline \end{array}$$

n)
$$\begin{array}{r} 9 \\ -3 \\ \hline \end{array}$$

o)
$$\begin{array}{r} 13 \\ -6 \\ \hline \end{array}$$

p)
$$\begin{array}{r} 15 \\ -8 \\ \hline \end{array}$$

B. Subtract across or horizontally.

a) $8 - 6 =$

b) $12 - 5 =$

c) $10 - 10 =$

d) $9 - 8 =$

e) $11 - 6 =$

f) $8 - 4 =$

g) $7 - 3 =$

h) $14 - 9 =$

i) $10 - 8 =$

j) $8 - 5 =$

k) $13 - 4 =$

l) $15 - 7 =$

m) $14 - 7 =$

n) $7 - 1 =$

o) $17 - 8 =$

p) $13 - 7 =$

C. Find the differences.

a)
$$\begin{array}{r} 45 \\ -23 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 78 \\ -15 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 84 \\ -52 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 57 \\ -10 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 78 \\ -21 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 69 \\ -43 \\ \hline \end{array}$$

$$\begin{array}{r} \text{g)} \quad 96 \\ -45 \\ \hline \end{array}$$

$$\begin{array}{r} \text{h)} \quad 88 \\ -35 \\ \hline \end{array}$$

$$\begin{array}{r} \text{i)} \quad 95 \\ -33 \\ \hline \end{array}$$

$$\begin{array}{r} \text{j)} \quad 45 \\ -15 \\ \hline \end{array}$$

$$\begin{array}{r} \text{k)} \quad 85 \\ -31 \\ \hline \end{array}$$

$$\begin{array}{r} \text{l)} \quad 87 \\ -45 \\ \hline \end{array}$$

D. Find the differences

$$\begin{array}{r} \text{a)} \quad 583 \\ -163 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b)} \quad 799 \\ -265 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c)} \quad 629 \\ -305 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d)} \quad 847 \\ -406 \\ \hline \end{array}$$

$$\begin{array}{r} \text{e)} \quad 978 \\ -252 \\ \hline \end{array}$$

$$\begin{array}{r} \text{f)} \quad 797 \\ -652 \\ \hline \end{array}$$

$$\begin{array}{r} \text{g)} \quad 765 \\ -243 \\ \hline \end{array}$$

$$\begin{array}{r} \text{h)} \quad 854 \\ -344 \\ \hline \end{array}$$

$$\begin{array}{r} \text{i)} \quad 536 \\ -314 \\ \hline \end{array}$$

$$\begin{array}{r} \text{j) } \quad 897 \\ -246 \\ \hline \end{array}$$

$$\begin{array}{r} \text{k) } \quad 669 \\ -238 \\ \hline \end{array}$$

$$\begin{array}{r} \text{l) } \quad 769 \\ -564 \\ \hline \end{array}$$

E. Word Problems

- a) One week, Tiago changed 258 light bulbs in the building. The next week, Tiago changed 141 light bulbs. How many more bulbs did Tiago change the first week?
- b) Anoki drove 769 kilometres while his friend Dasan drove 534 kilometres on their trip. How many more kilometres did Anoki drive?

Answers to Unit 3 Review

A.

- | | | | | |
|------|------|------|------|------|
| a) 3 | b) 1 | c) 2 | d) 4 | e) 9 |
| f) 7 | g) 8 | h) 5 | i) 0 | j) 6 |
| k) 9 | l) 3 | m) 8 | n) 6 | o) 7 |
| p) 7 | | | | |

B.

- | | | | | |
|------|------|------|------|------|
| a) 2 | b) 7 | c) 0 | d) 1 | e) 5 |
| f) 4 | g) 4 | h) 5 | i) 2 | j) 3 |
| k) 9 | l) 8 | m) 7 | n) 6 | o) 9 |
| p) 6 | | | | |

C.

- | | | | | |
|-------|-------|-------|-------|-------|
| a) 22 | b) 63 | c) 32 | d) 47 | e) 57 |
| f) 26 | g) 51 | h) 53 | i) 62 | j) 30 |
| k) 54 | l) 42 | | | |

D.

- | | | | | |
|--------|--------|--------|--------|--------|
| a) 420 | b) 534 | c) 324 | d) 441 | e) 726 |
| f) 145 | g) 522 | h) 510 | i) 222 | j) 651 |
| k) 431 | l) 205 | | | |

E.

- | | |
|--------------------|-------------------|
| a) 117 light bulbs | b) 235 kilometres |
|--------------------|-------------------|

CONGRATULATIONS!!

Now you have finished Unit 3.

TEST TIME!

Ask your instructor for the
Practice Test for this unit.
Once you've done the practice test,
you need to do the unit 3 test.
Again, ask your instructor for this.
Good luck!

Unit 4

Estimating, Time and Shapes

Topic A: Estimating

You use numbers in your everyday life. You often use **estimating** in your everyday life.

You go shopping and you only have twenty dollars, you may need to **estimate** how much your groceries are going to cost before you go to pay for them.

You commute by bus each day to work and it takes thirty-three minutes going to work and thirty-three minutes coming home at the end of the day. You would say that it takes you about one hour on the bus.

These are examples of **estimating**.

You have already learned about **rounding** numbers. You need to be able to round numbers in order to be able to **estimate**.

When you solve math problems, it is a good idea to **estimate** what the answer may be.

Estimating the answer means finding an answer that is close to the real answer. **Estimating** helps you to see if the real answer is sensible. To **estimate** an answer, you need to round the numbers then add or subtract the rounded numbers. Remember to round to the nearest ten.

$$\begin{array}{r} \text{Example:} \quad 23 \\ + 45 \\ \hline \end{array}$$

$$\begin{array}{r} \text{Estimate:} \quad 20 \\ + 50 \\ \hline 70 \end{array}$$

$$\begin{array}{r} \text{Example:} \quad 67 \\ - 31 \\ \hline \end{array}$$

$$\begin{array}{r} \text{Estimate:} \quad 70 \\ - 30 \\ \hline 40 \end{array}$$

$$\begin{array}{r} \text{Example:} \quad 372 \\ + 416 \\ \hline \end{array}$$

$$\begin{array}{r} \text{Estimate:} \quad 370 \\ + 420 \\ \hline 790 \end{array}$$

$$\begin{array}{r} \text{Example:} \quad 564 \\ - 243 \\ \hline \end{array}$$

$$\begin{array}{r} \text{Estimate:} \quad 560 \\ - 240 \\ \hline 320 \end{array}$$

Exercise One

Estimate the following answers. Be sure to round to the nearest 10 before adding. Check your work using the answer key at the end of the exercise.

a)
$$\begin{array}{r} 27 \\ + 31 \\ \hline \end{array}$$

Estimate:

b)
$$\begin{array}{r} 42 \\ + 51 \\ \hline \end{array}$$

Estimate:

c)
$$\begin{array}{r} 26 \\ + 32 \\ \hline \end{array}$$

Estimate:

d)
$$\begin{array}{r} 14 \\ + 52 \\ \hline \end{array}$$

Estimate:

e)
$$\begin{array}{r} 44 \\ + 24 \\ \hline \end{array}$$

Estimate:

f)
$$\begin{array}{r} 31 \\ + 27 \\ \hline \end{array}$$

Estimate:

g)
$$\begin{array}{r} 65 \\ + 22 \\ \hline \end{array}$$

Estimate:

h)
$$\begin{array}{r} 46 \\ + 23 \\ \hline \end{array}$$

Estimate:

i)
$$\begin{array}{r} 23 \\ + 72 \\ \hline \end{array}$$

Estimate:

j)
$$\begin{array}{r} 42 \\ + 36 \\ \hline \end{array}$$

Estimate:

k)
$$\begin{array}{r} 64 \\ + 14 \\ \hline \end{array}$$

Estimate:

l)
$$\begin{array}{r} 32 \\ + 20 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{m) } 423 \\ + 324 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{n) } 526 \\ + 345 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{o) } 123 \\ + 541 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{p) } 752 \\ + 243 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{q) } 429 \\ + 316 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{r) } 324 \\ + 115 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{s) } 162 \\ + 531 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{t) } 156 \\ + 322 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{u) } 302 \\ + 473 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{v) } 326 \\ + 607 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{w) } 312 \\ + 148 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{x) } 341 \\ + 248 \\ \hline \end{array}$$

Estimate:

Answers to Exercise One

a) 60	b) 90	c) 60	d) 60	e) 60	f) 60	g) 90
h) 70	i) 90	j) 80	k) 70	l) 50	m) 740	n) 880
o) 660	p) 990	q) 750	r) 440	s) 690	t) 480	u) 770
v) 940	w) 460	x) 590				

Exercise Two

Estimate the following answers. Be sure to round to the nearest 10 before subtracting. Check your work using the answer key at the end of the exercise.

a)
$$\begin{array}{r} 35 \\ -16 \\ \hline \end{array}$$

Estimate:

b)
$$\begin{array}{r} 52 \\ -14 \\ \hline \end{array}$$

Estimate:

c)
$$\begin{array}{r} 67 \\ -19 \\ \hline \end{array}$$

Estimate:

d)
$$\begin{array}{r} 51 \\ -23 \\ \hline \end{array}$$

Estimate:

e)
$$\begin{array}{r} 36 \\ -17 \\ \hline \end{array}$$

Estimate:

f)
$$\begin{array}{r} 72 \\ -44 \\ \hline \end{array}$$

Estimate:

g)
$$\begin{array}{r} 38 \\ -19 \\ \hline \end{array}$$

Estimate:

h)
$$\begin{array}{r} 74 \\ -26 \\ \hline \end{array}$$

Estimate:

i)
$$\begin{array}{r} 93 \\ -89 \\ \hline \end{array}$$

Estimate:

j)
$$\begin{array}{r} 82 \\ -57 \\ \hline \end{array}$$

Estimate:

k)
$$\begin{array}{r} 56 \\ -27 \\ \hline \end{array}$$

Estimate:

l)
$$\begin{array}{r} 94 \\ -48 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{m) } 752 \\ -342 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{n) } 765 \\ -439 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{o) } 673 \\ -424 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{p) } 645 \\ -309 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{q) } 811 \\ -502 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{r) } 591 \\ -57 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{s) } 972 \\ -447 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{t) } 178 \\ -152 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{u) } 471 \\ -146 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{v) } 316 \\ -222 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{w) } 678 \\ -425 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{x) } 486 \\ -211 \\ \hline \end{array}$$

Estimate:

Answers to Exercise Two

a) 20	b) 40	c) 50	d) 30	e) 20	f) 30	g) 20
h) 40	i) 0	j) 20	k) 30	l) 40	m) 410	n) 330
o) 250	p) 340	q) 310	r) 540	s) 520	t) 30	u) 320
v) 100	w) 250	x) 280				

Exercise Three

Estimate the following answers. Be sure to round to the nearest ten before adding or subtracting. Remember to circle the information and underline what is being asked. Check your work using the answer key at the end of the exercise.

Example: There are 186 people living in my apartment building. If 103 are children, how many are adults?

There are 186 people living in my apartment building. If 103 are children, how many are adults?

$$\begin{array}{r}
 186 \\
 -103 \\
 \hline
 \end{array}
 \qquad
 \text{Estimate:}
 \qquad
 \begin{array}{r}
 190 \\
 -100 \\
 \hline
 90
 \end{array}$$

About 90 people are adults.

- a) The bus has 84 passenger seats. All the seats are filled and 39 passengers are standing. How many passengers are on the bus?



b) Trisha counted 67 boxes on one shelf. She counted 78 boxes on the next shelf. How many boxes were there altogether?

c) The library loaned out 157 books on Monday. It loaned out 118 books on Tuesday. How many book did it loan on both days?

d) Ryan worked on the computer for 78 minutes. Helen worked on the computer for 54 minutes. How much longer did Ryan work on the computer?

e) The Ludlow factory has 73 people working in the factory. The Watson factory has 48 people working in their factory. How many more people work in the Ludlow factory?

f) Mr. Martinez needs 257 metres of fencing. He has 125 metres. How much more fencing does he need to buy?

Answers to Exercise Three

a) 120 passengers

b) 150 boxes

c) 280 books

d) 30 minutes

e) 20 people

f) 130 meters

Topic B: Time

The ancient Babylonians used a number system based on 60. We still use their number system when we talk about time.

There are 60 minutes in an hour, and there are 60 seconds in a minute.

60 minutes = 1 hour
60 seconds = 1 minute

Writing Time in Standard Format

Time is written in a standard format.

Hours: Minutes: Seconds

Example: 12 noon
would be written as 12:00:00
or 12:00 (without the seconds)

Example: 4 o'clock
would be written as 4:00:00
or 4:00 (without the seconds)

Example: 8 hours, 47 minutes, 3 seconds
would be written as 8:47:03

Note: When there is only one number, put in a zero to hold the tens place.

Example: 3 hours, 9 minutes, 3 seconds
would be written as 3:09:03

Exercise One

Write the following times in standard format. Check your work using the answer key at the end of the exercise.

Example: 2 hours, 7 minutes, 31 seconds

2:07:31

Note: If there is only one number, remember to put in a zero to hold the tens place.

a) 3 hours, 56 minutes, 42 seconds

b) 12 hours, 2 minutes, 29 seconds

c) 1 hour, 23 minutes, 54 seconds

d) 6 hours, 7 minutes, 39 seconds

e) 11 hours, 41 minutes

f) 7 hours, 14 minutes, 59 seconds

g) 21 hours, 36 minutes

h) 1 hour, 51 minutes, 41 seconds

i) 5 hours, 18 minutes, 10 seconds.

Answers to Exercise One

a) 3:56:42

b) 12:02:29

c) 1:23:54

d) 6:07:39

e) 11:41

f) 7:14:59

g) 21:36

h) 1:51:41

i) 5:18:10

A.M. and P.M.

You need to go to the dentist at 9:00 a.m. This is in the morning because of the **a.m.** The abbreviation **a.m.** means **ante meridiem** or **before noon**. We use a.m. for any times between 12 midnight and 12 noon.

You are meeting friends for dinner at 6:00 p.m. This is at night because of the **p.m.** The abbreviation **p.m.** means **post meridiem** or **after noon**. We use p.m. for any times between 12 noon and 12 midnight.

Example: You catch the bus at 7 o'clock in the morning.
The time would be written as 7:00 a.m.

Example: You are meeting friends to go fishing at 6:30 at night.
The time would be written as 6:30 p.m.

Exercise Two

Write the following times using **a.m.** or **p.m.** Check your work using the answer key at the end of the exercise.

Example: The sun rises at 7:07 in the morning.

7:07 a.m.

- a) Your shift at work starts at 8:30 in the morning.

- b) Your class starts at 1:00 in the afternoon.

- c) Your son has soccer practice at 4:00 in the afternoon.

d) You catch your bus at 6:15 in the morning.

e) You need to go to the doctor at 3:20 in the afternoon.

f) You eat dinner at 6:30 in the evening.

g) Your children go to bed at 8:45 in the evening.

h) Your alarm goes off at 5:50 in the morning.

i) Your friend called at 11:25 in the morning.

Answers to Exercise Two

a) 8:30 a.m.

b) 1:00 p.m.

c) 4:00 p.m.

d) 6:15 a.m.

e) 3:20 p.m.

f) 6:30 p.m.

g) 8:45 p.m.

h) 5:50 a.m.

i) 11:25 a.m.

Rounding Time

When you round time, if the minutes are more than thirty, you round up to the next number of hours. If the minutes are less than thirty, you remain at the same number of hours.

Example: If it took 45 minutes to drive to school, you would round that to one hour because 45 minutes is greater than 30 minutes.

Example: If it took one hour and 15 minutes to get to school by bus, you would round that to one hour because 15 minutes is less than 30 minutes.

Example: If it took 8 hours and 37 minutes to complete the painting job, you would round that to 9 hours because 37 minutes is greater than 30 minutes.

Exercise Three

Round the following times to the nearest hour. Check your work using the answer key at the end of the exercise.

Example: The movie lasted 3 hours and 13 minutes.

3 hours

- a) You needed 2 hours and 15 minutes for grocery shopping.

- b) It took 1 hour and 50 minutes to cook dinner.

- c) You drove for 9 hours and 23 minutes.

- d) Your baby slept for 1 hour and 47 minutes.

- e) You visited with friends for 3 hours and 11 minutes.

- f) It took 2 hours and 35 minutes to play the hockey game.

- g) You rode on the bus for 1 hour and 28 minutes.

- h) You walked to work in 38 minutes.

- i) How long does it take you to get to school?

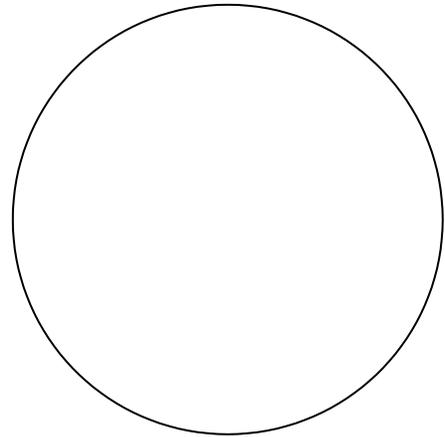
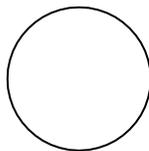
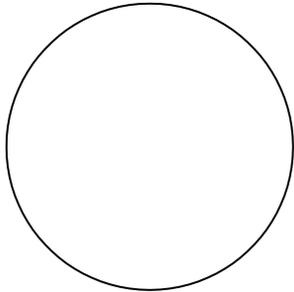
Answers to Exercise Three

- | | | |
|------------|------------|-------------------------------|
| a) 2 hours | b) 2 hours | c) 9 hours |
| d) 2 hours | e) 3 hours | f) 3 hours |
| g) 1 hour | h) 1 hour | i) check with your instructor |

Topic C: Shapes

Circle

The circle is a shape we all know.



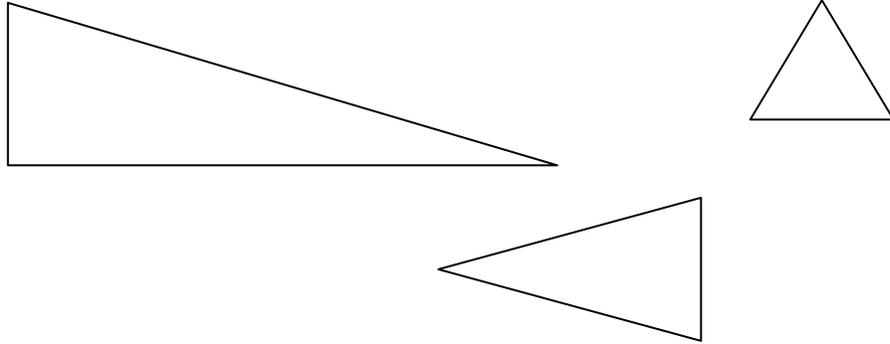
These objects suggest the idea of a circle.

- rim of coffee cups and glasses
- top of lamp shades
- top of cans of food
- compact discs
- the ends of pipes and hoses (called the *cross-section*)
- the coloured part of your eye (the iris)

Add some examples of your own.

Triangle

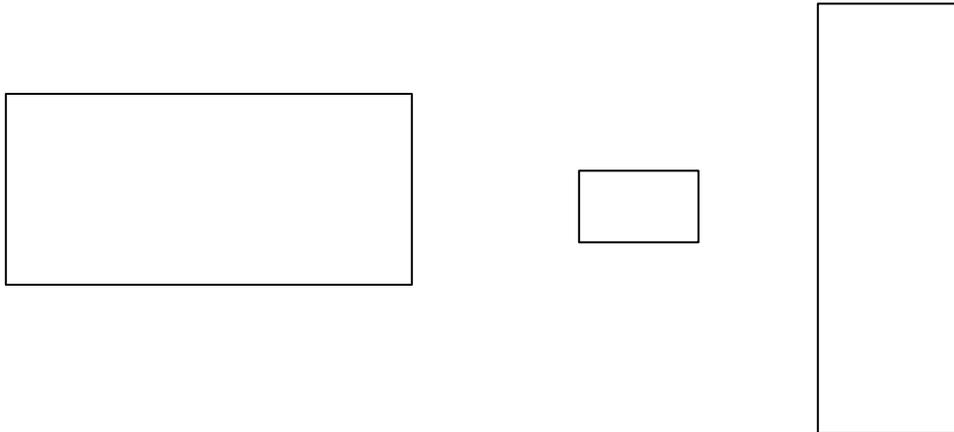
A **triangle** is a three-sided shape. Triangles have **three sides** and **three angles**.



Draw some different sized triangles here.

Rectangle

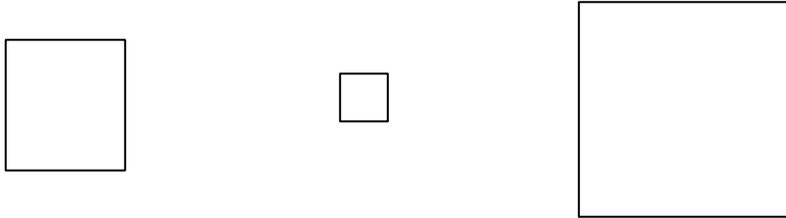
A **rectangle** is a four-sided shape. Rectangles have four sides and four **right** angles (square corners).



Can you think of anything that has a rectangle shape? Write it here.

Squares

A **square** is a special kind of rectangle. Squares have square corners and four sides are the same length

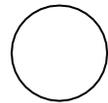


Can you think of anything that has a square shape? Write it here.

Exercise One

The following things give the idea of a shape. Write the name of the shape in each blank. Then draw the shape.

Example: A cookie is a circle.



a) A door is a _____.

b) This page is a _____.

c) A yield sign is a _____.

d) A room is usually a _____.

e) A coin is a _____.

f) A ten dollar bill is a _____.

g) The rim of a jar is a _____.



h) This warning sign is a _____.

i) A pizza is a _____.

Answers to Exercise One

a) rectangle

b) rectangle

c) triangle

d) rectangle

e) circle

f) rectangle

g) circle

h) triangle

i) circle

Exercise Two

Look around the room and find each of the following shapes. Write the name on the line. Have your instructor check your answers.

Example: A rectangle _____ door _____

a) A circle _____

b) A rectangle _____

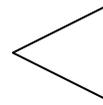
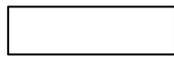
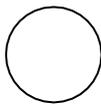
c) A square _____

d) A triangle _____

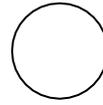
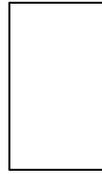
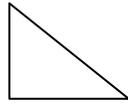
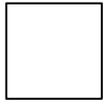
Exercise Three

Circle the correct shape in each line. Have your instructor check your answers.

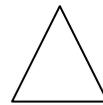
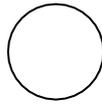
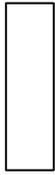
a) A rectangle.



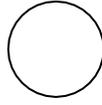
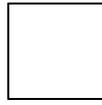
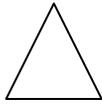
b) A circle



c) A square



d) A triangle



Exercise Four

What shape are the following things? Write **triangle, square, rectangle or circle** on the line.

a)



b)



c)



d)



e)



f)



g)



h)



Answers to Exercise Four

- a) circle b) triangle c) rectangle d) square e) rectangle or triangle
f) circle g) square h) rectangle

Unit 4 Review – Estimating, Time, Shapes

You will now practice all the skills you learned in Unit 4. Check your work using the answer key at the end of the review.

A. Estimate the following sums. Be sure to round to the nearest 10 before adding.

a)
$$\begin{array}{r} 23 \\ + 32 \\ \hline \end{array}$$

Estimate:

b)
$$\begin{array}{r} 68 \\ + 17 \\ \hline \end{array}$$

Estimate:

c)
$$\begin{array}{r} 34 \\ + 28 \\ \hline \end{array}$$

Estimate:

d)
$$\begin{array}{r} 42 \\ + 53 \\ \hline \end{array}$$

Estimate:

e)
$$\begin{array}{r} 74 \\ + 24 \\ \hline \end{array}$$

Estimate:

f)
$$\begin{array}{r} 33 \\ + 28 \\ \hline \end{array}$$

Estimate:

g)
$$\begin{array}{r} 17 \\ + 42 \\ \hline \end{array}$$

Estimate:

h)
$$\begin{array}{r} 27 \\ + 18 \\ \hline \end{array}$$

Estimate:

B. Estimate the following sums. Be sure to round to the nearest 10 before adding.

a)
$$\begin{array}{r} 625 \\ + 254 \\ \hline \end{array}$$

Estimate:

b)
$$\begin{array}{r} 432 \\ + 325 \\ \hline \end{array}$$

Estimate:

c)
$$\begin{array}{r} 328 \\ + 163 \\ \hline \end{array}$$

Estimate:

d)
$$\begin{array}{r} 529 \\ + 248 \\ \hline \end{array}$$

Estimate:

e)
$$\begin{array}{r} 536 \\ + 137 \\ \hline \end{array}$$

Estimate:

f)
$$\begin{array}{r} 867 \\ + 215 \\ \hline \end{array}$$

Estimate:

g)
$$\begin{array}{r} 843 \\ + 107 \\ \hline \end{array}$$

Estimate:

h)
$$\begin{array}{r} 435 \\ + 127 \\ \hline \end{array}$$

Estimate:

C. Estimate the following answers. Be sure to round to the nearest 10 before subtracting.

a)
$$\begin{array}{r} 43 \\ - 28 \\ \hline \end{array}$$

Estimate:

b)
$$\begin{array}{r} 64 \\ - 25 \\ \hline \end{array}$$

Estimate:

c)
$$\begin{array}{r} 73 \\ - 47 \\ \hline \end{array}$$

Estimate:

d)
$$\begin{array}{r} 83 \\ - 24 \\ \hline \end{array}$$

Estimate:

e)
$$\begin{array}{r} 68 \\ - 28 \\ \hline \end{array}$$

Estimate:

f)
$$\begin{array}{r} 54 \\ - 22 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{g) } 67 \\ -29 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{h) } 85 \\ -29 \\ \hline \end{array}$$

Estimate:

D. Estimate the following answers. Be sure to round to the nearest 10 before subtracting.

$$\begin{array}{r} \text{a) } 625 \\ -407 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{b) } 908 \\ -413 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{c) } 976 \\ -134 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{d) } 882 \\ -257 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{e) } 572 \\ -154 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{f) } 908 \\ -713 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{g) } 965 \\ -702 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{h) } 988 \\ -254 \\ \hline \end{array}$$

Estimate:

E. Write the following times in standard format.

- a) 10 hours, 20 minutes, 12 seconds

b) 8 hours, 45 minutes, 6 seconds

c) 5 hour, 32 minutes, 45 seconds

d) 1 hour, 7 minutes, 28 seconds

e) 12 hours, 55 minutes

f) 6 hours, 5 minutes, 39 seconds

F. Write the following times using a.m. or p.m.

a) The movie starts at 6:45 in the evening.

b) Your friend calls and wakes you up at 3:23 in the morning.

c) Your dog barks at the mailman at 2:35 in the afternoon.

d) Your morning break is at 10:15.

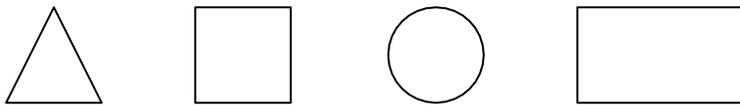
G. Round the following times to the nearest hour.

- a) You took a walk for 47 minutes.

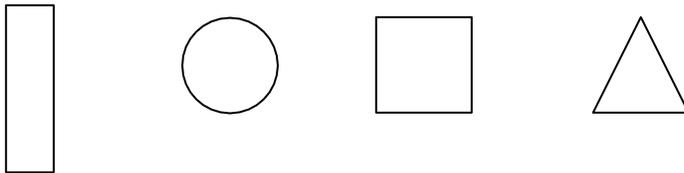
- b) Your round trip (there and back) to the mall took 2 hours and 12 minutes.

H. Circle the correct shape in each line.

- a) A triangle



- b) A square



I. The following things give the idea of a shape. Write the name of the shape in each blank.

- a) A window is a _____.

b) A checkerboard is a_____.

c) A watch is a_____.

d) A yield sign is a_____.

J. Word Problems. Estimate the following answers. Be sure to round to the nearest 10 before adding or subtracting. Remember to circle the information and underline what is being asked.

a) The Sears Tower is 443 metres tall. It has a 105 metre TV antenna on top.
Estimate the height of the building and the antenna.

b) A restaurant used 76 kilograms of potatoes and 68 kilograms of meat.
Estimate how many kilograms of potatoes and meat the restaurant used altogether.

c) Paolo's father weighs 78 kilograms. Paolo weighs 29 kilograms. **Estimate** how much more Paolo's father weighs.

d) Chi bought 54 litres of gasoline on Tuesday. He bought 38 litres of gasoline on Friday. **Estimate** how many litres of gas he bought altogether.

Answers to Unit 4 Review

A.

- a) 50 b) 90 c) 60 d) 90 e) 90 f) 60
g) 60 h) 50

B.

- a) 880 b) 760 c) 490 d) 780 e) 680 f) 1 090
g) 950 h) 570

C.

- a) 10 b) 30 c) 20 d) 60 e) 40 f) 30
g) 40 h) 60

D.

- a) 220 b) 500 c) 850 d) 620 e) 420 f) 200
g) 270 h) 740

E.

- a) 10:20:12 b) 8:45:06 c) 5:32:45
d) 1:07:28 e) 12:55 f) 6:05:39

F.

- a) 6:45 p.m. b) 3:23 a.m. c) 2:35 p.m.
d) 10:15 a.m.

G.

- a) 1 hour b) 2 hours

H.

Have your instructor check these.

I.

- a) rectangle b) square c) circle
d) triangle

J.

- a) 550 metres b) 150 kilograms c) 50 kilograms
d) 90 litres

CONGRATULATIONS!!

Now you have finished Unit 4.

TEST TIME!

Ask your instructor for the
Practice Test for this unit.
Once you've done the practice test,
you need to do the unit 4 test.
Again, ask your instructor for this.
Good luck!

Book 1 Review

You will now practice all the skills you learned in Book 1. Check your work using the answer key at the end of the review.

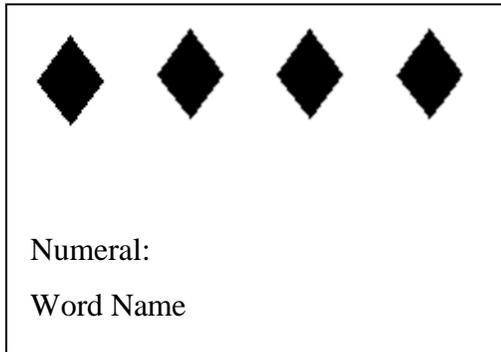
If you can't remember how to do a question, go back to the lesson on this topic to refresh your memory. The unit and topic for where each question came from is listed next to the question.

Example: **1-B** means Unit 1, Topic B

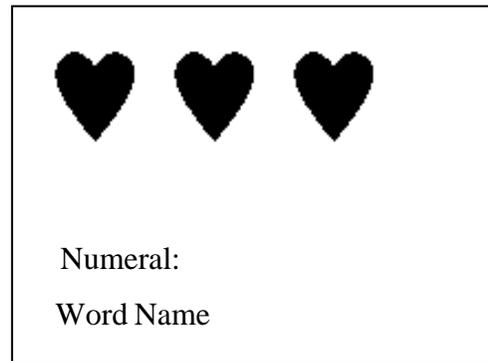
1-B

A. Count the number of things in each picture. Write the number and word name.

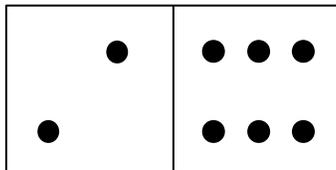
a)



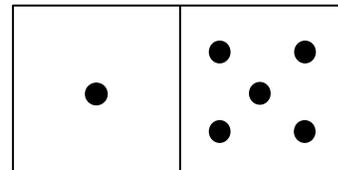
b)



c)



d)

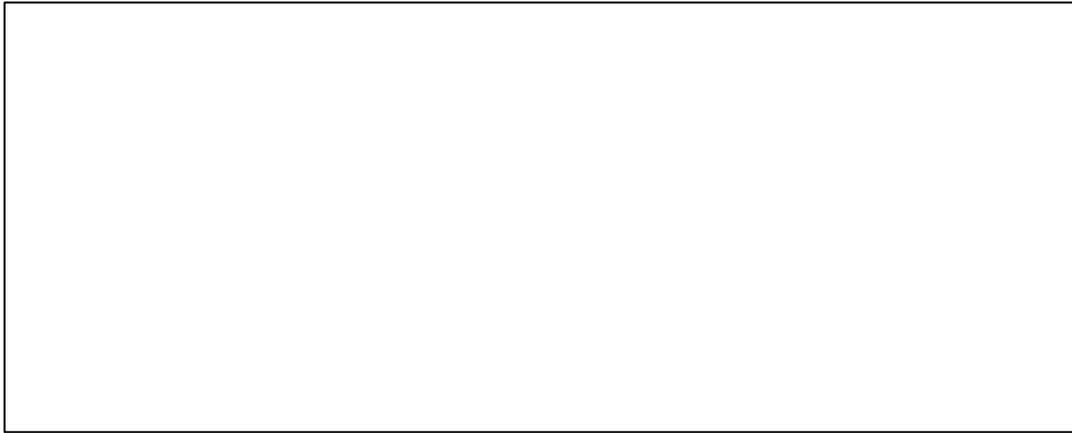


1-C

B. Fill the blanks to make each sentence true. Draw a picture for b and d.

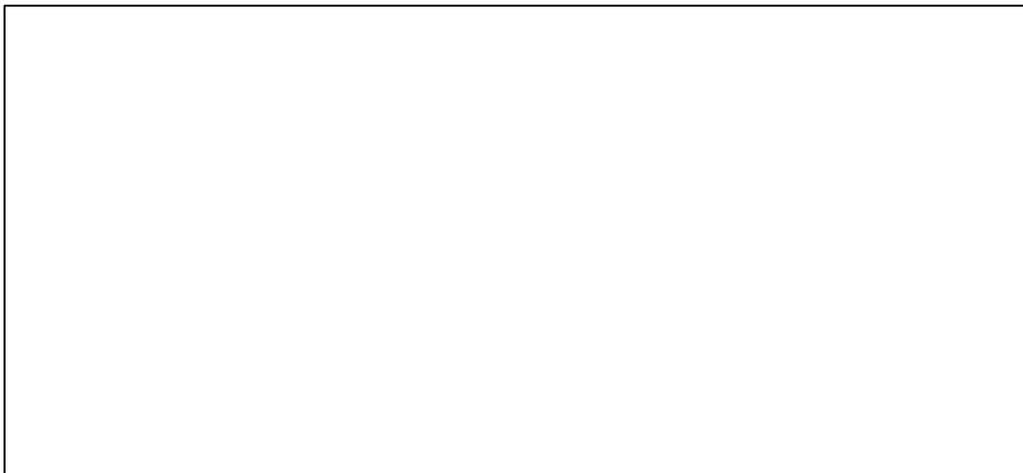
a) 58 means _____ tens and _____ ones.

- b) 18 means _____ tens and _____ ones.
Draw your picture below.



- c) 471 means _____ hundreds, _____ tens, _____ ones.

- d) 127 means _____ hundreds, _____ tens, _____ ones.
Draw your picture below.



C. Write the place value name (ones, tens, hundreds) for each underlined digit.

- a) 564 _____ b) 239 _____

- c) 986 _____ d) 534 _____

D. Name the digit for the place value named from the number below.

5 782

a) tens _____ b) hundreds _____

E. Write the word names for the numbers.

a) 17 _____

b) 342 _____

c) 625 _____

F. Write numerals for these word names.

a) seventy-five _____ b) nineteen _____

c) seven hundred fifty _____ d) nine hundred five _____

e) eight hundred seventy-three _____

1-D

G. Place a box around the larger number.

a) 452 245 b) 678 687

H. Arrange these numbers in order from smallest to largest.

a) 86 668 886 686 868 66 866

- b) 23 323 223 33 332 322 232
-

I. Write $<$, $>$ or $=$ in each blank as needed.

- a) 23 _____ 34 b) 118 _____ 118
c) 667 _____ 576 d) 405 _____ 450

1-E

J. Round each number to the nearest 10.

- a) 52 _____ b) 123 _____
c) 178 _____ d) 89 _____

K. Word Problems. For each problem, round the numbers to the nearest 10.

- a) The polar bear can weigh 1 002 kilograms, a koala bear can weigh 14 kilograms, a panda bear can weigh 113 kilograms, a kodiak bear can weigh 679 kilograms and a black bear can weigh 272 kilograms. Round each number to the nearest 10.

Bear	Number	Rounded Number
Polar bear		
Koala bear		
Panda bear		
Kodiak bear		
Black bear		

L. How much money do you have?

a)



How much money do you have? _____ cents

b)



How much money do you have? _____ dollars

2-A

M. Check out your addition facts.

a)
$$\begin{array}{r} 0 \\ + 8 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 2 \\ + 3 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 8 \\ + 2 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 1 \\ + 4 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 5 \\ + 0 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 9 \\ + 5 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 6 \\ + 7 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 3 \\ + 6 \\ \hline \end{array}$$

N. Add across or horizontally.

a) $7 + 4 =$

b) $3 + 0 =$

c) $2 + 9 =$

d) $9 + 8 =$

e) $6 + 2 =$

f) $5 + 6 =$

g) $8 + 9 =$

h) $4 + 2 =$

O. Find the sums.

a)
$$\begin{array}{r} 4 \\ 5 \\ +3 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 2 \\ 7 \\ +8 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 4 \\ 2 \\ +8 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 4 \\ 6 \\ +7 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 3 \\ 2 \\ +3 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 6 \\ 1 \\ +5 \\ \hline \end{array}$$

P. Find the sums.

a)
$$\begin{array}{r} 5 \\ 2 \\ 3 \\ +4 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 2 \\ 3 \\ 4 \\ +7 \\ \hline \end{array}$$

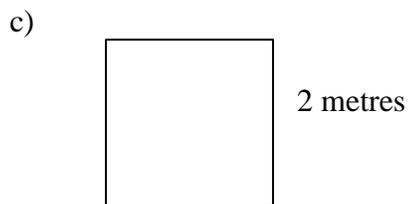
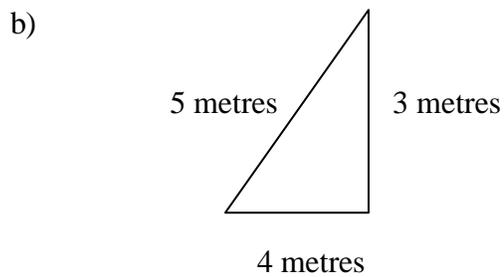
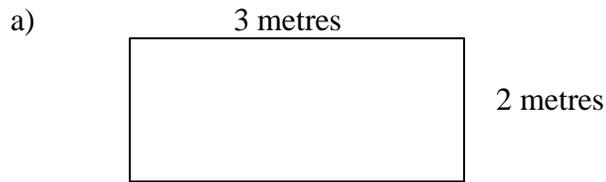
c)
$$\begin{array}{r} 3 \\ 0 \\ 1 \\ +2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d)} \quad 2 \\ \quad 3 \\ \quad 1 \\ \hline \quad +2 \end{array}$$

$$\begin{array}{r} \text{e)} \quad 5 \\ \quad 1 \\ \quad 3 \\ \hline \quad +2 \end{array}$$

$$\begin{array}{r} \text{f)} \quad 4 \\ \quad 3 \\ \quad 2 \\ \hline \quad +6 \end{array}$$

Q. Find the perimeter of the shape. Be sure to put the unit of measure in your answer. Write the name of the shape below the picture.



R. Find the sums.

a)
$$\begin{array}{r} 46 \\ + 33 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 35 \\ + 93 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 82 \\ + 56 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 91 \\ + 17 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 740 \\ + 859 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 638 \\ + 610 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 521 \\ + 848 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 970 \\ + 625 \\ \hline \end{array}$$

S. Word Problems.

a) Seven cars were in the first row. Four cars were in the second row. How many cars are there in the first two rows?

b) One bicycle store ordered 56 bikes. Another store ordered 72 bikes. How many bikes did both stores order?

- c) A mail carrier walked 51 kilometres in a week. The next week she walked 48 kilometres the next week. How far did she walk in two weeks?

3-A

T. Check out your subtraction facts.

a)
$$\begin{array}{r} 9 \\ -5 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 6 \\ -3 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 17 \\ -8 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 14 \\ -7 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 14 \\ -9 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 11 \\ -2 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 12 \\ -5 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 9 \\ -3 \\ \hline \end{array}$$

U. Subtract across or horizontally.

a) $4 - 1 =$

b) $8 - 2 =$

c) $17 - 8 =$

d) $11 - 6 =$

e) $6 - 4 =$

f) $11 - 3 =$

g) $10 - 1 =$

h) $13 - 8 =$

3-B**V. Find the differences.**

a)
$$\begin{array}{r} 76 \\ - 25 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 84 \\ - 43 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 95 \\ - 74 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 69 \\ - 16 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 852 \\ - 321 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 789 \\ - 650 \\ \hline \end{array}$$

g)
$$\begin{array}{r} 938 \\ - 801 \\ \hline \end{array}$$

h)
$$\begin{array}{r} 959 \\ - 532 \\ \hline \end{array}$$

W. Word Problems. Solve each work problem.

a) There were 18 roses in a bouquet. Milton gave 9 roses away. How many roses were left?

b) A city has 89 mail carriers. One day only 54 were at work. How many were not at work?

- c) Mariko and Stefan went 5-pin bowling. Mariko scored 274 points while Stefan scored 152. How many more points did Mariko score?

4-A

X. Estimate the following answers. Be sure to round to the nearest 10 before adding.

a)
$$\begin{array}{r} 81 \\ + 74 \\ \hline \end{array}$$

Estimate:

b)
$$\begin{array}{r} 53 \\ + 39 \\ \hline \end{array}$$

Estimate:

c)
$$\begin{array}{r} 43 \\ + 68 \\ \hline \end{array}$$

Estimate:

d)
$$\begin{array}{r} 733 \\ + 719 \\ \hline \end{array}$$

Estimate:

e)
$$\begin{array}{r} 907 \\ + 448 \\ \hline \end{array}$$

Estimate

f)
$$\begin{array}{r} 623 \\ + 914 \\ \hline \end{array}$$

Estimate:

Y. Estimate the following answers. Be sure to round to the nearest 10 before subtracting.

a)
$$\begin{array}{r} 82 \\ - 59 \\ \hline \end{array}$$

Estimate:

b)
$$\begin{array}{r} 67 \\ - 38 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{c) } 61 \\ - 17 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{d) } 968 \\ - 426 \\ \hline \end{array}$$

Estimate:

$$\begin{array}{r} \text{e) } 577 \\ - 171 \\ \hline \end{array}$$

Estimate

$$\begin{array}{r} \text{f) } 742 \\ - 533 \\ \hline \end{array}$$

Estimate:

Z. Word Problems. Estimate the following answers. Be sure to round to the nearest 10 before adding or subtracting.

a) Mr. Han worked in his store for 33 years. Before owning a store, he had worked in a bank for 24 years. How many years has Mr. Han worked?

b) The longest span of the Lions Gate Bridge in Vancouver is 473 metres. The longest span of the Confederation Bridge in Prince Edward Island is 247 metres. What is the difference?

4-B

AA. Write the following times in standard format.

a) 3 h, 22 min, 51 s

b) 8 h, 38 min, 9 s

c) 10 h, 18 min, 23 s

d) 7 h, 43 min, 34 s

BB. Write the following times using a.m. or p.m.

a) The movie begins at 8:30 in the evening.

b) The coffee shop opens at 5:15 in the morning.

c) The shopping mall closes at 10:00 at night.

CC. Round the following times to the nearest hour.

a) The running time for the movie was 2 hours and 25 minutes.

b) It took 5 hours and 53 minutes to go the hockey and return home after the game.

DD. The following things give the idea of a shape. Write the name of the shape in each blank.

j) A Christmas tree is a _____.

k) A swimming pool is a _____.

l) A quarter is a _____.

EE. What shape are the following things. Write triangle, square, rectangle or circle on the line.

a)



b)

8		4	6		7
				4	
	1			6	5
5	9		3	7	8
			7		
	4	8	2	1	3
	5	2			9
		1			
3			9	2	
					5

Answers to Book 1 Review

A.

- a) 4, four b) 3, three c) 8, eight d) 6, six

B.

- a) 5 tens, 8 ones b) 1 ten, 8 ones c) 4 hundreds, 7 tens, 1 one
d) 1 hundred, 2 tens, 7 ones

C.

- a) tens b) ones c) tens d) hundreds

D.

- a) 8 b) 7

E.

- a) seventeen b) three hundred forty-two c) six hundred twenty-five

F.

- a) 75 b) 19 c) 750 d) 905 e) 873

G.

- a) b)

H.

- a) 66 86 668 686 866 868 886 b) 23 33 223 232 322 323 332

I.

- a) < b) = c) > d) <

J.

- a) 50 b) 120 c) 180 d) 90

K.

a)

Bear	Number	Rounded Number
Polar bear	1 002	1 000
Koala bear	14	10
Panda bear	113	110
Kodiak bear	679	680
Black bear	272	270

L.

- a) 40 cents b) 12 dollars

M.

- a) 8 b) 5 c) 10 d) 5 e) 5
f) 14 g) 13 h) 9

N.

- a) 11 b) 3 c) 11 d) 17 e) 8
f) 11 g) 17 h) 6

O.

- a) 12 b) 17 c) 14 d) 17 e) 8 f) 12

P.

- a) 13 b) 16 c) 6 d) 8 e) 11 f) 15

Q.

- a) 10 metres, rectangle b) 12 metres, triangle c) 8 metres, square

R.

- a) 79 b) 128 c) 138 d) 108 e) 1 799
f) 1 248 g) 1 369 h) 1 595

S.

- a) 11 cars b) 128 bikes c) 99 kilometres

T.

- a) 4 b) 3 c) 9 d) 7 e) 5
f) 9 g) 7 h) 6

U.

- a) 3 b) 6 c) 9 d) 5 e) 2
f) 8 g) 9 h) 5

V.

- a) 51 b) 41 c) 21 d) 53 e) 531
f) 139 g) 137 h) 427

W.

- a) 9 roses b) 35 mail carriers c) 122 points

X.

- a) $80 + 70 = 150$ b) $50 + 40 = 90$ c) $40 + 70 = 110$
d) $730 + 720 = 1\,450$ e) $910 + 450 = 1\,360$ f) $620 + 910 = 1\,530$

Y.

- a) $80 - 60 = 20$ b) $70 - 40 = 30$ c) $60 - 20 = 40$
d) $970 - 430 = 540$ e) $580 - 170 = 410$ f) $740 - 530 = 210$

Z.

- a) 50 years b) 220 metres

AA.

- a) 3:22:51 b) 8:38:09 c) 10:18:23 d) 7:43:34

BB.

- a) 8:30 p.m. b) 5:15 a.m. c) 10:00 p.m.

CC.

- a) 2 hours b) 6 hours

DD.

- a) triangle b) rectangle c) circle

EE.

- a) rectangle b) square

Glossary

addends The numbers to be added together in an addition question. In $3 + 5 = 8$, the addends are 3 and 5.

axis Any straight line used for measuring or as a reference.

balance Balance has many meanings. In money matters, the balance is the amount left. It might be the amount left in a bank account (bank balance) or it might be the amount you still must pay on a bill (balance owing).

cancelled cheque A cheque that has been cashed. The cheque is stamped, or cancelled, so it is no longer negotiable.

circumference The distance around a circle; the perimeter of a circle.

commission Salespeople may be paid a percentage of the money made in sales. The commission is part or all their earnings.

common fractions eg, $\frac{2}{3}$, $\frac{3}{7}$, $\frac{49}{50}$

cross multiply In a proportion, multiply the numerator of the first fraction times the denominator of the second fraction. Then multiply the denominator of the first fraction times the numerator of the second fraction. In a true proportion, the products of the cross multiplication are equal.

denominator The bottom number in a common fraction; tells into how many equal parts the whole thing has been divided.

diameter The distance across a circle through its centre.

difference The result of a subtraction question, the answer. Subtraction gives the difference between two numbers.

digit Any of the ten numerals (0 to 9) are digits. This term comes from our ten fingers which are called digits. The numerals came to be called "digits" from the practice of counting on the fingers!

discount An amount taken off the regular cost. If something is bought "at a discount" it is bought at less than the regular price.

divide To separate into equal parts.

dividend The number or quantity to be divided; what you start with before you divide.

divisor The number of groups or the quantity into which a number (the dividend) is to be separated.

equal = The same as

equation A mathematical statement that two quantities are equal. An equation may use numerals with a letter to stand for an unknown quantity. $6 + Y = 9$

equivalent Equal in value; equivalent numbers (whole or fractions) can be used interchangeably; that is, they can be used instead of each other.

estimate Make an approximate answer. Use the sign \approx to mean approximately equal.

factors The numbers or quantities that are multiplied together to form a given product. $5 \times 2 = 10$, so 5 and 2 are factors of 10.

fraction Part of the whole; a quantity less than one unit.

horizontal in a flat position; we are horizontal when we lie in a bed. A horizontal line goes across the page.

improper fraction A common fraction with a value equal to or more than one.

infinite Without end, without limit.

invert To turn upside down.

like fractions With the same denominators.

lowest terms When the terms of a common fraction or ratio do not have a common factor (except 1), the fraction or ratio are in lowest terms (also called simplest form).

minuend The first number in a subtraction question.

mixed number A whole number and a common fraction. $1 \frac{3}{4}$

mixed decimal A whole number and a decimal fraction. 1.75

multiple If a certain number is multiplied by another number, the product is a multiple of the numbers. Think of the multiplication tables. For example, 2, 4, 6, 8, 10, 12, 14. . . are multiples of 2.

multiplicand The number to be multiplied.

multiplier The number you multiply by.

negotiable Something which can be cashed, that is, exchanged or traded as money.

numbers Numbers represent the amount, the place in a sequence; *number* is the idea of quantity or order.

numerals The digits 1,2,3,4,5,6,7,8,9,0 are also called numerals. These ten digits are combined to make infinite numerals. Digits are like the letters, numerals are like the words and numbers are the meaning.

numerator The top number in a common fraction; the numerator tells how many parts of the whole thing are being considered.

overdrawn If the value of the cheques or money taken from a bank account is higher than the amount of money in the account, then the account is overdrawn. The account is "in the hole" or "in the red" are expressions sometimes used.

parallel Two objects or lines side by side, never crossing and always the same distance from each other. Railway tracks are parallel, the lines on writing paper are parallel.

percent % For every one hundred.

perimeter The distance around the outside of a shape.

place value We understand numbers by the way the digits (numerals) are arranged in relationship to each other and to the decimal point. Each position has a certain value. Our number system is a **decimal system**. The place value is based on **ten**.

prime number A number that can only be divided evenly by itself and 1.

product The result of a multiplying question, the answer.

proper fraction A common fraction with a value less than one.

proportion Generally, proportion is a way of comparing a part of something to the whole thing. Eg. his feet are small in proportion to his height. In mathematics, proportion is used to describe two or more ratios that are equivalent to each other.

quotient The result of a division question; the quotient tells how many times one number is contained in the other.

radius The distance from the centre of a circle to the outside of the circle.

ratio The relationship between two or more quantities. Eg. the ratio of men to women in the armed forces is 10 to 3 (10:3)

reciprocal A number, when multiplied by its reciprocal, equals 1. To find the reciprocal of a common fraction, invert it. $\frac{3}{5} \times \frac{5}{3} = 1$

reduce Write a common fraction in lowest terms. Divide both terms by same factor.

remainder The amount left when a divisor does not divide evenly into the dividend. The remainder must be less than the divisor.

sign In mathematics, a symbol that tells what operation is to be performed or what the relationship is between the numbers.

- + plus, means to add
- minus, means to subtract
- × multiplied by, "times"
- ÷ divided by, division
- = equal, the same quantity as
- ≠ not equal
- ≈ approximately equal
- < less than
- > greater than
- ≤ less than or equal to
- ≥ greater than or equal to

simplify See *reduce*.

subtrahend The amount that is taken away in a subtraction question.

sum The result of an addition question, the answer to an addition question.

symbol A written or printed mark, letter, abbreviation etc. that stands for something else.

term a) A definite period of time, such as a school term or the term of a loan.
b) Conditions of a contract; the terms of the agreement. c) In mathematics, the quantities in a fraction and in a ratio are called the *terms* of the fraction or the *terms* of the ratio. In an algebra equation, the quantities connected by a + or - sign are also called terms.

total The amount altogether.

transaction One piece of business. A transaction often involves money. When you pay a bill, take money from the bank or write a cheque, you have made a transaction.

unit Any fixed quantity, amount, distance or measure that is used as a standard. In mathematics, always identify the unit with which you are working. Eg. 3 km, 4 cups, 12 people, \$76, 70 books, 545 g.

unit price The price for a set amount. Eg. price per litre, price per gram.

unlike fractions Fractions which have different denominators.

vertical in an up and down position; we are vertical when we are standing up. On a page, a vertical line is shown from the top to the bottom of the page.