

Important Concepts . . .

# Preview Review



**Mathematics**

**Grade 6**

**W1 - Lesson 1: Basic Facts, Basic  
Operations, and Integers**

## Important Concepts of Grade 6 Mathematics

W1 - Lesson 1 .....	Basic Facts, Basic Operations, and Integers
W1 - Lesson 2 .....	Place Value, Whole Numbers, Decimals, and Common Fractions
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W1 - Lesson 4 .....	Ratios and Percents
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W3 - Lesson 4 .....	Number Patterns, Magic Squares, and Problem Solving
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**Materials Required: A textbook is not needed. This is a stand-alone course.**

Mathematics Grade 6  
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Preview/Review W1 - Lesson 1

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# Preview/Review Concepts for Grade Six Mathematics



*W1 - Lesson 1:  
Basic Facts, Basic  
Operations, and Integers*

# OBJECTIVES

By the end of this lesson, you should

- know basic facts of addition, subtraction, multiplication, and division
- perform basic operations of addition, subtraction, multiplication, and division
- understand positive and negative integers

## GLOSSARY

**addition:** the process of combining amounts to have more

**integer:** a positive or negative number or a zero

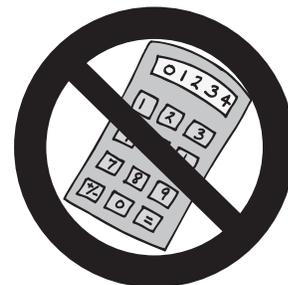
**multiplication:** the process of increasing an amount a number of times

**subtraction:** the process of removing some amount to have less

## W1 - Lesson 1: Basic Facts, Basic Operations, and Integers

Welcome to the Preview/Review of Grade Six Mathematics. This course contains 15 lessons, each 90 minutes in length. No textbook is required because all instructions and worksheets are provided.

Welcome to W1 - Lesson 1! This lesson tests your knowledge of the basic facts and your competency in basic mathematics operations. Four two-minute timed quizzes (addition, subtraction, multiplication, and division) and two short exams are included. The first exam is on addition and subtraction and the second exam is on multiplication and division. Students are **not** allowed to use calculators because the purpose of the tests is to evaluate their present skill levels.



At the end of the lesson, you are asked to evaluate your work on that lesson. Please be specific and honest in your evaluation. You are asked three questions. Notice the sample answers. Your answers at the end of each lesson show you know what you know, and they help your teacher help you!

### Self-Evaluation

Ask yourself some important questions. Write your answers in sentences for your teacher.

1. In this lesson, what part of your work was **excellent**?  
Example: *I know my times tables to 6 very well. I understand integers and basic operations.*
2. In this lesson, what part of your work needs improvement?  
Example: *I know my times tables to 6 very well, but I have trouble with 7, 8, and 9 times tables.*
3. If you want help for some of the work in this lesson, ask your teacher in this space.  
Example: *I need help with long division. I get too many wrong.*

Complete as many operations as possible in the time allotted for each operation.

**Basic Facts: Addition..... Two Minutes**

$6 + 3 = \underline{\quad}$      $4 + 9 = \underline{\quad}$      $6 + 5 = \underline{\quad}$      $7 + 2 = \underline{\quad}$      $4 + 7 = \underline{\quad}$

$1 + 8 = \underline{\quad}$      $4 + 5 = \underline{\quad}$      $9 + 7 = \underline{\quad}$      $8 + 8 = \underline{\quad}$      $5 + 7 = \underline{\quad}$

$9 + 6 = \underline{\quad}$      $7 + 8 = \underline{\quad}$      $8 + 2 = \underline{\quad}$      $5 + 9 = \underline{\quad}$      $4 + 8 = \underline{\quad}$

$3 + 9 = \underline{\quad}$      $6 + 6 = \underline{\quad}$      $8 + 5 = \underline{\quad}$      $7 + 6 = \underline{\quad}$      $8 + 9 = \underline{\quad}$

$7 + 7 = \underline{\quad}$      $4 + 6 = \underline{\quad}$      $9 + 9 = \underline{\quad}$      $6 + 8 = \underline{\quad}$      $3 + 7 = \underline{\quad}$

Number of questions completed:           Number of questions correct:       

**Basic Facts: Subtraction..... Two Minutes**

$10 - 4 = \underline{\quad}$      $8 - 3 = \underline{\quad}$      $15 - 6 = \underline{\quad}$      $9 - 7 = \underline{\quad}$      $12 - 5 = \underline{\quad}$

$7 - 3 = \underline{\quad}$      $11 - 9 = \underline{\quad}$      $6 - 2 = \underline{\quad}$      $16 - 7 = \underline{\quad}$      $13 - 8 = \underline{\quad}$

$15 - 2 = \underline{\quad}$      $14 - 6 = \underline{\quad}$      $12 - 8 = \underline{\quad}$      $13 - 6 = \underline{\quad}$      $17 - 9 = \underline{\quad}$

$8 - 1 = \underline{\quad}$      $10 - 7 = \underline{\quad}$      $5 - 0 = \underline{\quad}$      $12 - 9 = \underline{\quad}$      $11 - 3 = \underline{\quad}$

$18 - 9 = \underline{\quad}$      $9 - 4 = \underline{\quad}$      $16 - 8 = \underline{\quad}$      $13 - 4 = \underline{\quad}$      $14 - 5 = \underline{\quad}$

Number of questions completed:           Number of questions correct:

**Basic Facts: Multiplication..... Two Minutes**

$9 \times 2 = \underline{\quad}$   $4 \times 4 = \underline{\quad}$   $2 \times 6 = \underline{\quad}$   $8 \times 8 = \underline{\quad}$   $0 \times 4 = \underline{\quad}$

$6 \times 3 = \underline{\quad}$   $8 \times 9 = \underline{\quad}$   $8 \times 7 = \underline{\quad}$   $6 \times 9 = \underline{\quad}$   $6 \times 6 = \underline{\quad}$

$9 \times 0 = \underline{\quad}$   $9 \times 5 = \underline{\quad}$   $8 \times 6 = \underline{\quad}$   $7 \times 7 = \underline{\quad}$   $8 \times 4 = \underline{\quad}$

$9 \times 7 = \underline{\quad}$   $5 \times 5 = \underline{\quad}$   $7 \times 6 = \underline{\quad}$   $7 \times 3 = \underline{\quad}$   $4 \times 9 = \underline{\quad}$

$4 \times 8 = \underline{\quad}$   $2 \times 8 = \underline{\quad}$   $9 \times 3 = \underline{\quad}$   $9 \times 9 = \underline{\quad}$   $3 \times 8 = \underline{\quad}$

Number of questions completed:          Number of questions correct:         **Basic Facts: Division ..... Two Minutes**

$4 \div 1 = \underline{\quad}$   $28 \div 4 = \underline{\quad}$   $36 \div 6 = \underline{\quad}$   $24 \div 8 = \underline{\quad}$   $10 \div 2 = \underline{\quad}$

$14 \div 2 = \underline{\quad}$   $56 \div 7 = \underline{\quad}$   $40 \div 8 = \underline{\quad}$   $72 \div 9 = \underline{\quad}$   $54 \div 6 = \underline{\quad}$

$36 \div 9 = \underline{\quad}$   $35 \div 5 = \underline{\quad}$   $18 \div 3 = \underline{\quad}$   $56 \div 8 = \underline{\quad}$   $40 \div 5 = \underline{\quad}$

$64 \div 8 = \underline{\quad}$   $42 \div 7 = \underline{\quad}$   $27 \div 3 = \underline{\quad}$   $63 \div 7 = \underline{\quad}$   $12 \div 2 = \underline{\quad}$

$16 \div 4 = \underline{\quad}$   $81 \div 9 = \underline{\quad}$   $30 \div 5 = \underline{\quad}$   $48 \div 6 = \underline{\quad}$   $32 \div 8 = \underline{\quad}$

Number of questions completed:          Number of questions correct:

**Test 1: Addition and Subtraction Exam..... Seven Minutes**

Students **may not** use calculators. Complete as many as possible in the time allowed. Check your work if you have time.

1. 
$$\begin{array}{r} 26 \\ 35 \\ 48 \\ + 73 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 224 \\ 537 \\ 810 \\ + 645 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 7869 \\ + 2463 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 9573 \\ - 4668 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 82630 \\ - 53574 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 760 \\ 939 \\ 425 \\ + 778 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 4081 \\ 5253 \\ 6798 \\ + 3024 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 25895 \\ 94325 \\ 65466 \\ + 45321 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 8003 \\ - 2195 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 70802 \\ - 39814 \\ \hline \end{array}$$

Number of questions completed: \_\_\_\_\_ Number of questions correct: \_\_\_\_\_

**Test 2: Multiplication and Division Exam ..... Ten Minutes**

Students **may not** use calculators. Complete as many as possible in the time allowed. Check your work if you have time.

1. 
$$\begin{array}{r} 54 \\ \times 3 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 807 \\ \times 4 \\ \hline \end{array}$$

3. 
$$3 \overline{)468}$$

4. 
$$11 \overline{)9438}$$

5. 
$$7 \overline{)6048}$$

6. 
$$\begin{array}{r} 875 \\ \times 64 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 369 \\ \times 254 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 96 \\ \times 25 \\ \hline \end{array}$$

9. 
$$41 \overline{)96\,391}$$

10. 
$$25 \overline{)9475}$$

Number of questions completed: \_\_\_\_\_ Number of questions correct: \_\_\_\_\_

## Integers

An **integer** is a positive or negative whole number or a zero.

A positive integer is written with the symbol +.  
+7 is read as “positive seven”.

A negative integer is written with the symbol –.  
–4 is read as “negative four”.

We use integers everyday. Notice that the bolded key words determine if the numbers are positive or negative.

**Some examples:** (answer in brackets)

- The army tank **advanced** 25 metres. (+25)
- The stairway went **up** 11 floors. (+11)
- The temperature **fell** 8 degrees. (–8)
- The Oilers are **leading** the Flames by 2 goals. (+2)
- The Canadian skier was 35 metres **behind** the leader. (–35)

## Questions

- Write the following integers in words:

**Example:** + 49: positive forty-nine

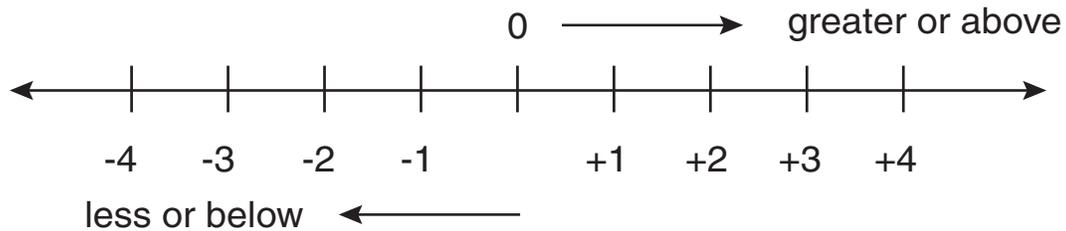
- 34: \_\_\_\_\_
- +18: \_\_\_\_\_
- +205: \_\_\_\_\_
- 799: \_\_\_\_\_
- +802: \_\_\_\_\_

2. Write these integers in numerals and symbols.

**Example:** Negative three hundred twenty:  $-320$

- a. positive six: \_\_\_\_\_
- b. negative fifty-four: \_\_\_\_\_
- c. negative two hundred eighteen: \_\_\_\_\_
- d. positive four thousand three hundred twenty-seven: \_\_\_\_\_
- e. negative six thousand and two: \_\_\_\_\_

3. Name the next three integers.



**Example:** below +56: +55, +54, +53 (Think: Finding the numbers below is like counting backwards.)

- a. above +4: \_\_\_\_\_
- b. above -8: \_\_\_\_\_
- c. below +96: \_\_\_\_\_
- d. above -123: \_\_\_\_\_
- e. greater than +62: \_\_\_\_\_
- h. greater than -209: \_\_\_\_\_

4. Write the next 3 integers in each series:

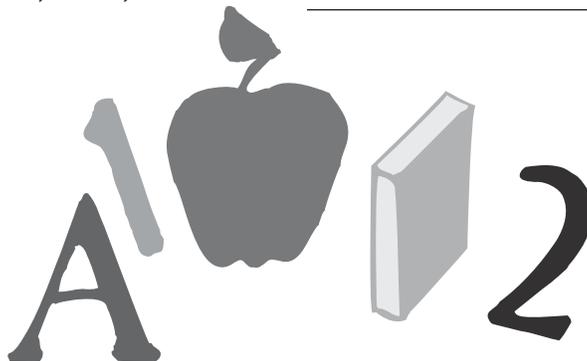
**Example:** +2, +4, +6: +8, +10, +12 (Think: Plus two, four, and six are followed by plus eight, ten, and twelve.)

- a. 0, +3, +6, \_\_\_\_\_
- b. -7, -11, -15, \_\_\_\_\_
- c. -20, -15, -10, \_\_\_\_\_
- d. +100, +125, +150, \_\_\_\_\_
- e. +512, +256, +128, \_\_\_\_\_
- f. -888, -789, -690, \_\_\_\_\_

5. Arrange the integers in order from least to greatest:

**Example:** +56, -23, +129, -444, 0: -444, -23, 0, +56, +129

- a. -231, -456, -1 006, -95, -198 \_\_\_\_\_
- b. +8, +6, 0, -11, +26 \_\_\_\_\_
- c. +98, +765, -56, -876, +22 \_\_\_\_\_
- d. -77, -88, -34, 0, +51 \_\_\_\_\_
- e. +987, +5, -456, -87, -1 224 \_\_\_\_\_



6. Complete the following integer sentences:

**Example:**  $(-8) + (+12) = +4$

- a.  $(-4) + (-9) = \underline{\hspace{2cm}}$
- b.  $(+7) + (+18) = \underline{\hspace{2cm}}$
- c.  $(-13) + (+11) = \underline{\hspace{2cm}}$
- d.  $(+34) + (-15) = \underline{\hspace{2cm}}$
- e.  $(-49) + (+27) + (+24) = \underline{\hspace{2cm}}$
- f.  $(+87) + (-41) + (-35) = \underline{\hspace{2cm}}$



7. Arrange in order from largest to smallest:

**Example:**  $+444, +555, -23, -345, +200$ :  $+555, +444, +200, -23, -345$

- a.  $+700, +860, +1\ 335, +24, +444$

\_\_\_\_\_

- b.  $-2, -5, 0, -20, +5$

\_\_\_\_\_

- c.  $-17, +22, -19, +20, +9$

\_\_\_\_\_

- d.  $+123, +213, +312, +137, +270$

\_\_\_\_\_

- e.  $-1\ 007, -1\ 024, -1\ 042, -1\ 070, 0$

\_\_\_\_\_



## Homework Assignment

Following are the scores of a charity golf match played by Tiger Woods, Mike Weir, Wayne Gretzky, and Premier Ralph Klein.

Hole Number	1	2	3	4	5	6	7	8	9	Total
Par	5	5	4	5	5	3	4	4	5	40
Tiger Woods	4	4	4	3	4	3	3	3	4	
Mike Weir	4	5	3	4	4	3	4	3	3	
Ralph Klein	8	7	5	5	7	4	6	5	8	
Wayne Gretzky	4	5	3	7	4	3	4	4	6	

1. Calculate each player's final score.

- a. Tiger \_\_\_\_\_
- b. Mike \_\_\_\_\_
- c. Ralph \_\_\_\_\_
- d. Wayne \_\_\_\_\_

2. Write each player's total score as an integer showing whether he is above or below par.

- a. Tiger \_\_\_\_\_
- b. Mike \_\_\_\_\_
- c. Ralph \_\_\_\_\_
- d. Wayne \_\_\_\_\_



### Self-Evaluation

Ask yourself some important questions. Write your answers in sentences for your teacher.

1. In this lesson, what part of your work was **excellent**?

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2. In this lesson, what part of your work **needs improvement**?

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3. If you want help for some of the work in this lesson, ask your teacher in this space.

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