Important Concepts . . .

Preview Review

Mathematics   **Grade 5**

W1 - Lesson 1: Number Sense
Numbers 0 to 100 000

Important Concepts of Grade 5 Mathematics

Materials Required

Protractor
Ruler
Calculator

A textbook is not needed.

This is a stand-alone course.

Alberta Distance Learning Centre has an Internet site that you may find useful. The address is as follows: **http://www.adlc.ca**

The use of the Internet is optional. Exploring the electronic information superhighway can be educational and entertaining. However, be aware that these computer networks are not censored. Students may unintentionally or purposely find articles on the Internet that may be offensive or inappropriate. As well, the sources of information are not always cited and the content may not be accurate. Therefore, students may wish to confirm facts with a second source.

Preview/Review Concepts
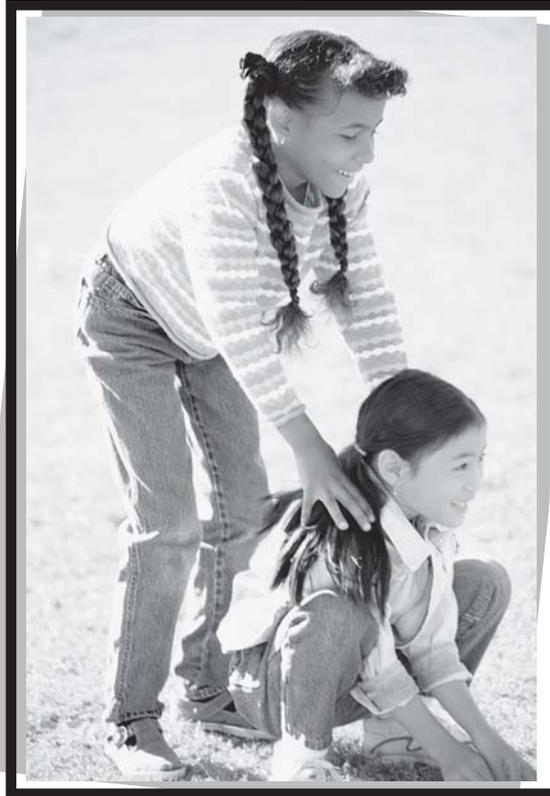# for
Grade Five Mathematics

OBJECTIVES

By the end of this lesson, you should

- understand that numbers are symbols like pictures and words

- compare numbers as greater than (>) and less than (<)

- round numbers to give approximate amounts

Glossary of Terms

Base Ten Blocks: a combination of cubes and rods in sets of 1, 10, 100, or 1 000 blocks are used to represent numbers.

Estimation: a "good guess" is used as a quick way of finding the approximate answer. We can learn methods and tools to give us the "best guess".

Expanded Form: The number is written to show the place value of each digit.

Example: 5 000 + 600 + 20 + 8 or Five thousands, six hundreds, two tens, five ones

Numeral: A number in symbol form is a numeral.

Example: 375 628

Place Value: Each digit of a number has a place. The place of the number tells the value of the number.

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
3	7	5	6	2	8

Rounding: in estimation, numbers are changed to give approximate value.

Example: 375 628 can be rounded to 400 000 or 380 000 or 376 000 or 375 600 or 375 630

Standard Form: The common form of a number is the standard form.

Example: 5 628

Word Form: The number is written in word format.

Example: five thousand six hundred twenty-eight
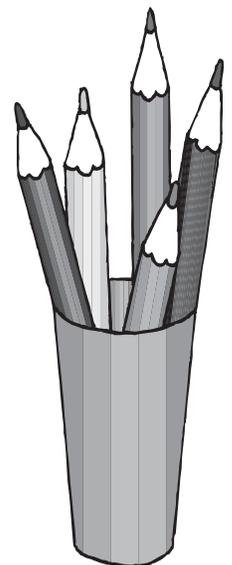
W1 - Lesson 1: Number Sense Numbers 0 to 100 000

Concepts:

- Representing Numbers with Pictures
- Writing Numbers in Word Form
- Writing Numerals from Word Form
- Comparing Numbers: Greater Than (>) and Less Than (<)
- Rounding Numbers to the Nearest ...

Representing Numbers with Pictures

Why Do We "Picture" a Number?

We write numbers in picture format to help us add, subtract, multiply, divide, or estimate.

Thousands	Hundreds	Tens	Ones
1	1	1	1

Write the following number in standard form.

 _____

 _____

Money is another way of picturing large numbers. Use the following symbols to answer the questions below.

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
100 000	10 000	1 000	100	10	1

_____

_____

.... _Developed by Alberta Distance Learning Centre_
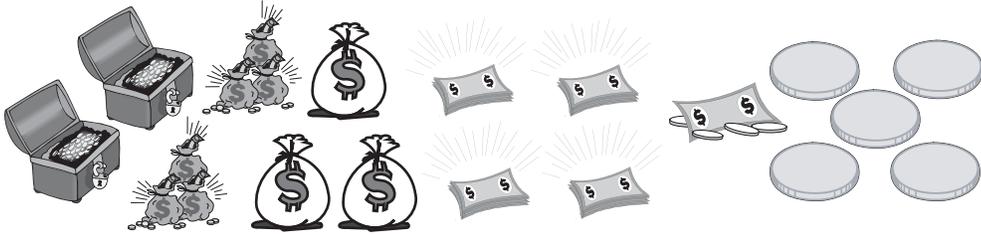
Writing Numbers in Word Form

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
❄ ❄ ❄ ❄ ❄	❄ ❄ ❄	❄ ❄ ❄ ❄ ❄ ❄ ❄ ❄ ❄	❄ ❄	❄	❄ ❄ ❄ ❄ ❄ ❄ ❄ ❄
500 000	30 000	9 000	200	10	8
5	3	9	2	1	8
Thousands			Ones		

1. Arrange the numbers in Thousands and Ones, starting with the number on the farthest to the left. (539 thousands and 218 ones) Each group may not have more than three digits.

2. Write the number in groups. (Five hundred thirty-nine thousand is the first group. Two hundred eighteen is the second group.)

This is how to change a number 539 218 from **standard form** to **word form**.

Try some of the following:

     a.   687 251 _____

                      _____

     b.   25 329 _____

                      _____

     c.   736 812 _____

                      _____

Writing Numerals From Word Form

Again, you must group your numbers into thousands and ones. As you read the words, write the **numeral form** of the word in thousands, then in hundreds.

Six hundred and fifty-eight thousand, four hundred and seventy

Think: Six hundred and fifty-eight thousand—stop and write the first part: 658.
Now read the last part, four hundred and seventy.
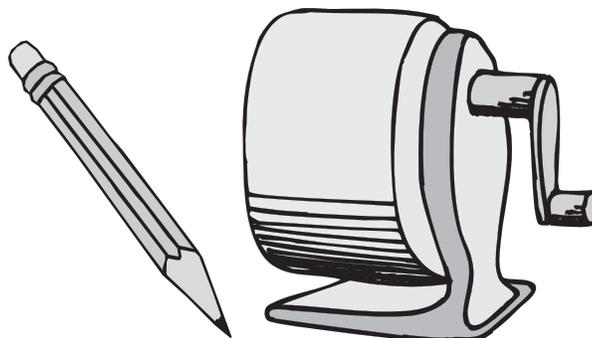You had 658; now complete the question with the 470.
Your answer is 658 470.
Notice that "zero" is not mentioned, yet the number 70 has a zero.

Write the numerical form for the following:

a.   Two hundred sixty-eight thousand, four hundred twelve

_____

b.   Five hundred two thousand, one hundred seventy-one

_____

c.   Ninety-six thousand, three hundred fifteen

_____

Comparing Numbers: Greater Than (>) and Less Than (<)

Which number is smaller? Which number is larger?

Circle the larger number in each box.

Four hundred seventy-seven thousand, nine hundred sixty-five 477 955	22 599 Two hundred twenty-two thousand, five hundred ninety-nine

Fifty thousand, eight hundred ten Fifty thousand, eight hundred one	4 hundred thousands + 4 ten thousands + 6 thousands + 9 hundreds + 4 tens + 7 ones 400 000 + 40 000 + 8 000 + 400 + 90 + 7

|	
Use the *greater than* (>) and *less than* (<) signs to complete the following. a. 346 927____ 364 927 b. 98 654_____ 123 456 c. 687 125____ 687 152 d. 957 578____ 957 577	Put the following numbers in order from smallest to largest. a. 654 324 _____ b. 234 486 _____ c. 655 324 _____ d. 234 468 _____ e. 78 687 _____

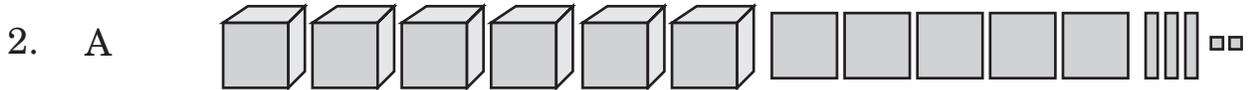Each of the following shows two numbers, which is smaller: A or B? **Circle** your answer.

1.

A

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
❄ ❄ ❄ ❄ ❄	❄ ❄ ❄ ❄ ❄ ❄	❄ ❄ ❄	❄ ❄ ❄ ❄ ❄ ❄ ❄	❄ ❄ ❄ ❄	❄ ❄ ❄

B

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
5	6	9	7	4	2

2. A

B
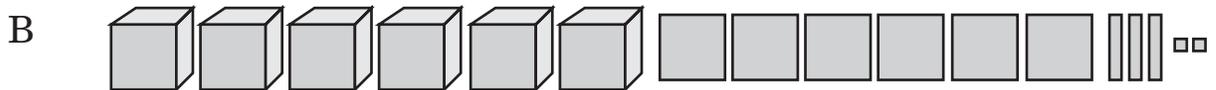
Rounding Numbers to the Nearest . . .

We **round numbers** to give approximate or estimated amounts. Rounding numbers requires two basic steps:

1. Choose the **place value** to which the number must be rounded. Example: 547 rounded to the nearest ten = 550 or rounded to the nearest hundred = 500.

2. Use the "Five Up—Four Down" rule. If the number to be rounded is five or greater, you round up; if the number to be rounded is four or less, you round down.

893 387

Rounded to the nearest ten 893 3**87**
(Does the 87 turn to 80 or 90?) 893 3 _____

Round to the nearest hundred 893 **387**
(Does the 387 turn to 300 or 400?) 893 _____

Round to the nearest thousand 89**3 387**
(Does the 3 387 turn to 3 000 or 4,000?) 89 __   _____

Round to the nearest ten thousand 8**93 387**
(Does the 93 387 turn to 90 000 or 100 000?) 8 ___   _____

Round to the nearest hundred thousand **893 387**
(Does the 893 387 turn to 800 000 or 900 000?) _____ _____

Circle the letter that best fits the number at the top of each box.

1.
955 358
Rounded to the nearest
ten thousand

    a.   955 000

    b.   965 000

    c.   960 000

    d.   940 000

2.
257 215
Rounded to the nearest
hundred

    a.   257 300

    b.   257 000

    c.   257 220

    d.   257 200

3.
654 522
Rounded to the nearest
thousand

    a.   655 000

    b.   654 000

    c.   650 000

    d.   654 500
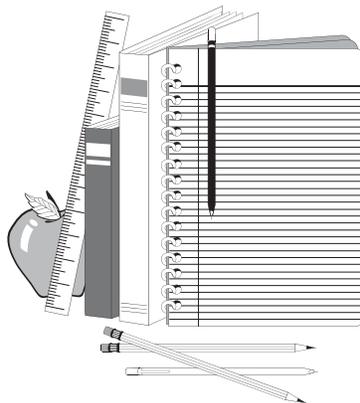
4.
912 422
Rounded to the nearest
thousand

    a.   912 400

    b.   912 000

    c.   913 000

    d.   910 000

5. Round the following numbers to the nearest hundred thousand.

    a. 344 316 _____

    b. 654 346 _____

    c. 165 854 _____

    d. 352 324 _____

    e. 325 345 _____

    f. 243 355 _____

6. Mark read that the Yukon Quest International Dog Sled Race is 1 646 kilometres. Mark was surprised at the length of the race and wanted to tell his friend Chris. Mark knew that he would not be able to remember 1 646 km, so he rounded the distance to the **nearest hundred**.

What number did Mark remember? Write your answer in a sentence.

_____

_____

_____

_____