Chpt 3 Lesson 1: Intro to Integers date _____
NOTES

cabulary:

Integers - _____

Opposites - _____

Absolute value - _____

Symbol: _____

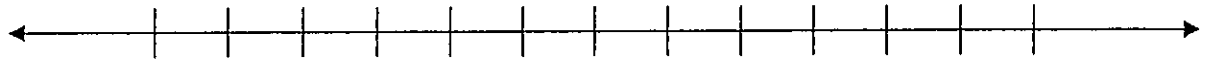
Ways to write integers:

Positive _____ or _____

Negative _____

Note: A negative sign really means to do the opposite. Knowing this what does – (-4) mean?

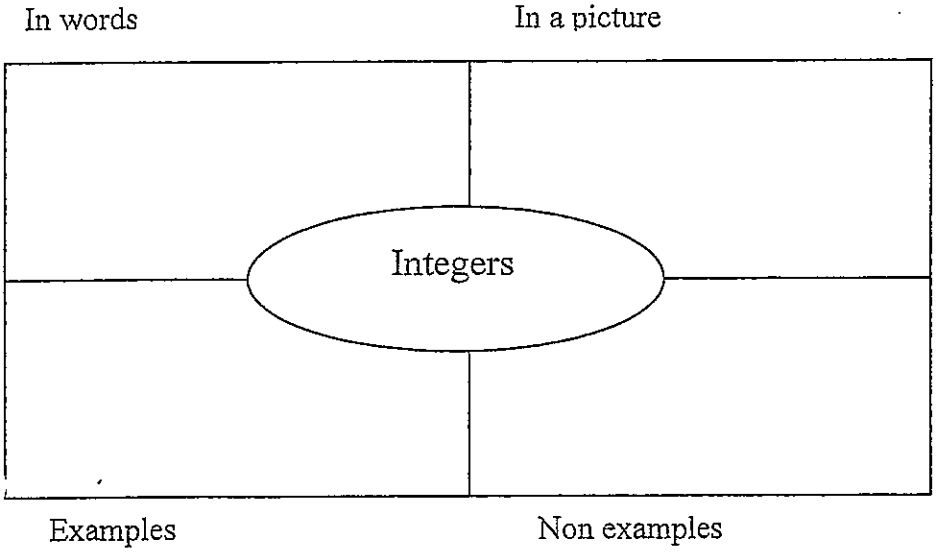
Putting integers on a number line:



Comparison symbols:

> means _____ < means _____

Complete the graphic organizer:



Examples:

Write an integer to represent each situation.

1) 8° below zero

2) $4 loss

3) 6 weeks after the party

4) 3 miles above sea level

Write the opposite of each integer.

5) -5

6) 4

7) 65

8) -32

Find the absolute value.

9) $|-17|$

10) $|-3298|$

11) $|0|$

12) $|+65|$

Compare the integers.

13) -7 ___ -2

14) -67 _____ 45

15) -1 _____ -6

16) $|-5|$ _____ 5

Put the integers in order from least to greatest.

17) -8,604 -12,600 -8,052 -11,248

18) -252 -245 -313 -262

Put the integers in order from greatest to least.

19) 5 -7 2 0 -4 -1

20) -1 7 -9 -3 -7 6

Check your understanding.

1) Describe some real life situations where you might use negative numbers.

Lesson 2: Adding integers date _____

Vocabulary:

Additive Inverse - _____

Rules for adding like integers:

1) _____

2) _____

Rules for adding unlike integers:

1) _____

2) _____

Examples:

a) 4 + 3 b) 2 + 3 c) 5 + 1

d) -4 + -3 e) -2 + -3 f) -5 + -1

g) 4 + -2 h) -5 + 7 i) -3 + 8

j) -9 + 6 k) -10 + 4 l) 3 + -10

Let's practice!!

1) -8 + -2 2) 5 + 5 3) -3 + -3 4) 2 + 7

5) -7 + -1 6) 0 + -8 7) 6 + 3 8) -6 + -4

9) -8 + 4

10) -4 + 8

11) 5 + -2

12) -5 + 2

13) 9 + -3

14) -3 + -9

15) -10 + 2

16) -2 + 10

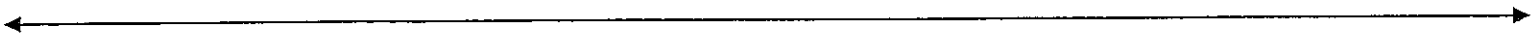
17) 3 + -9

18) -4 + -8

19) 9 + -6

20) 5 + -5

21) Label the number line and plot your answers on the number line.



22) If the temperature outside is -5, name the temperature that would make the sum 0.

23) A roller coaster starts at a certain point. It goes up 20 feet then drops 35 feet and goes back up 16 feet to the end of the ride. What is the total change in position of the roller coaster car?

Lesson 3: Subtracting Integers date ____

NOTES

** When subtracting integers - you add the opposite **

Steps:

1) _____

2) _____

3) _____

** Now you follow the rules for adding! **

Examples:

a) 15 - 20 b) 10 - 15 c) 20 - 35 d) 12 - 29

e) -15 - 20 f) 10 - -15 g) -20 - 35 h) 12 - -29

Let's practice!!

1) -6 - -4 2) -10 - -10 3) 20 - -5 4) -2 - 12

5) -4 - -5 6) -9 - 2 7) 15 - -30 8) 13 - -20

Solve. Let x = -2 and y = -4

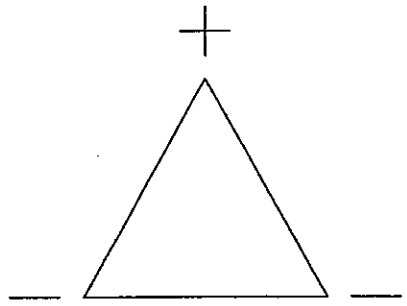
9) x - 6 10) y - x 11) -(-x) - 3 12) -y - -x

13) Temperatures on the moon vary from -173°C to 127°C. Find the difference between the highest and lowest temperatures.

Lessons 4 & 5: Multiplying and dividing integers date ____
NOTES

Ways to write multiplication:

1) _____ 2) _____ 3) _____



Rules:

Multiply or divide the numbers first!!!

Like signs ----> _____

Unlike signs -------> _____

Examples:

a) -10(7) b) 7(10) c) -9(4)

d) -8(-6) e) (-9)(5) f) (13)(-3)

g) -39 ÷ 3 h) 18 ÷ 2 i) -16 ÷ 1

j) -25 ÷ -5 k) -15 ÷ 3 l) 32 ÷ -4

m) $(-3)^2$ n) -3(-4)(-2) o) $(-1)^2$

Let's Practice!!

1) 4(2) 2) -6(-7) 3) 5 (-4)

4) -21 ÷ 7 5) -16 ÷ -2 6) 20 ÷ -4

7) $(-5)^2$ 8) -7(-5)(-3) 9) $(-2)^2$

Solve. Let x = -4

10) -4x 11) 28 ÷ x 12) x ÷ -2 13) 7(-x)

14) Once a skydiver opens the parachute, the diver descends (falls) at a rate of 5 m/sec. Where will the skydiver be after 4 seconds in relation to where the parachute opened?

15) A Great White Shark has 3,000 teeth. The shark gains and loses teeth throughout its life. Suppose the shark gains 3 teeth each day for 5 days but doesn't lose any.

a) Write a multiplication problem to show this.

b) Write 2 division problems related to the multiplication problem.

16) Fill in the chart below based on the one that was done.

Multiplication	Division	Same or different Signs	Quotient	Positive or Negative?
2 (6) = 12	12 ÷ 2 = 6	Same	6	Positive
	12 ÷ 6 = 2	Same	2	Positive
2(-4) = -8				
-3(15) = -45				
-2(-5) = 10				

Order of Operations pg. _____ date _____
NOTES

The order of operations is used when there is more than one operation in the problem. Consider the following example:

$$4 - 3 + 5 \times 7$$

Steps:

1) _____

2) _____

3) _____

4) _____

Examples:

1) $18 \div (4 + -13)$

2) $4 + 20 \div -5$

3) $26 - 7 \times 2 + 3$

4) $12(-5) + -3(-6)$

5) $3(1) - 4 + 5$

6) $3^2 - (10 + 3) \times 8 \div -4$

7) $-3 \times 9 + 10 \div -2$

8) $15 \div (9 + 3 \times 2)$

9) $(20 + 2 \times 8 - 6) \div -6$