

# PRE-ALGEBRA

October 3-7

- Monday, October 3, 2011
- SW subtract integers and evaluate expressions containing variables
- 1. SW complete review quiz
- 2. CW review reading about subtracting integers, working through various examples whole group
- 3. Complete in class assignment
- 4. SW begin working on homework

- Key Concept for Subtracting Integers:  
To subtract integers add the additive inverse
- Additive inverse: integers and their opposites  
 $-3$   $3$        $10$   $-10$
- Steps: 1) Keep the first term  
 2) Change subtraction to addition  
 3) Find inverse (opposite) of 2<sup>nd</sup> term  
 4) Follow rules for adding integers

- Subtract a positive integer
- 1) Keep 1<sup>st</sup> term  
 2) Change sub<sup>t</sup> to addition  
 3) Find inverse of 2<sup>nd</sup> term  
 4) Follow rules adding integers
1.  $9 - 16 = -7$   
 $9 + (-16) = 16 - 9 = -7$
2.  $-5 - 11 = -16$   
 $-5 + (-11) = 5 + 11 = -16$
3.  $-3 - 1 = -4$   
 $-3 + (-1) = 3 + 1 = -4$
- Steps

- Subtract a negative integer
- 1) Keep 1<sup>st</sup> term  
 2) Change sub<sup>t</sup> to add.  
 3) Find inverse of 2<sup>nd</sup> term  
 4) Follow rules of adding integers
1.  $12 - (-4) = 16$   
 $12 + 4 = 16$
2.  $-6 - (-15) = 9$   
 $-6 + 15 = 15 - 6 = 9$
3.  $-11 - (-12) = 1$   
 $-11 + 12 = 12 - 11 = 1$
- Add integers  
 Never change addition to subtraction

- Evaluate each expression;  $x = -3, y = 8, z = -12$
- Solve      1) Rewrite equation
1.  $12 - z$   
 $12 - (-12) = 12 + 12 = 24$
2.  $z - x$   
 $-12 - (-3) = -12 + 3 = 12 - 3 = -9$
3.  $z - y - x$   
 $-12 - 8 - (-3)$   
 $-12 + (-8) + 3$   
 $-20 + 3 = 20 - 3 = -17$

- Class Work: Page 95; 1-13 all
- Homework: Page 95-96; 16-31 every third, 32-52 even  
Read and take notes pages 100-102

- Tuesday, October 4, 2011
  - SW multiply integers and simplify algebraic expressions
1. SW complete review quiz
  2. CW review student notes on multiplying integers and work through various examples
  3. SW complete class work assignment
  4. SW begin working on homework
- Subtracting Integers*
- 1) Keep 1st term.
  - 2) Change subtraction to addition
  - 3) Find inverse of second term
  - 4) Follow rules adding int.

- Multiplying integers with different signs: <sup>two</sup>  
Answer is negative  
 $- \cdot + = -$ ,  $+ \cdot - = -$
  - Multiplying integers with the same signs: <sup>two</sup>  
Answer is positive  
 $- \cdot - = +$ ,  $+ \cdot + = +$
- Steps: 1) Multiply numbers  
2) Determine sign of answer

- Multiply integers with different signs. <sup>Answer is negative</sup>
1.  $7(-8) = 7(8) = -56$   
 $+ \cdot -$
  2.  $-6(12) = 6(12) = -72$   
 $- \cdot +$
  3.  $-3 \cdot 4 = 3 \cdot 4 = -12$   
 $- \cdot +$
- 1) Multiply  
2) Determine Sign*

- Multiply integers with the same sign. <sup>Answer is positive</sup>
1.  $-5(-11) = 5(11) = +55$   
 $- \cdot -$
  2.  $15(3) = 15(3) = +45$   
 $+ \cdot +$
  3.  $[-3(-4)](-5) = 3 \cdot 4 = +12(-5) = 12(5) = -60$   
 $- \cdot -$
- Comm(x)  
3(-2)(4)  
[3(4)](-2) = 3(4) = +12  
12(-2) = 12 \cdot 2 = + \cdot - = -24*

- Simplify and evaluate algebraic expressions
1.  $-3(6y) = 3(6) = -18y$   
 $- \cdot +$
  2.  $-7a(3b) = 7(3) = -21ab$   
 $- \cdot +$
  3. Evaluate 2rs if  $r = 5$  and  $s = -10$   
 $[2(5)](-10)$   
 $+10(-10) = 10 \cdot 10 = -100$   
 $+ \cdot -$
- No value for variable  
1) Multiply numbers  
2) Put variable after the number  
3) Determine Sign*
- Value for variable given  
1) Rewrite & replace variables  
2) Follow mult. steps*

- Class work: Page 102; 4-16 all
- Homework: Page 103; 19-43 every third, 46-54 even  
Read and take notes on pages 106-108

- Wednesday, October 5, 2011
- SW divide integers and find the average of a set of data
- 1. Complete review quiz
- 2. CW review notes on dividing integers and work through various examples together
- 3. SW complete in class assignment
- 4. SW begin homework

Steps  
 1) Multiply  
 2) Determine Sign

→ Mult. Int  
 Both have same sign  
 Answer is positive  
 Have different signs  
 Answer is negative

- Dividing integers with the same sign:  
Answer is positive  
 $- \div - = +$      $+ \div + = +$

- Dividing integers with different signs:  
Answer is negative  
 $- \div + = -$  ,  $+ \div - = -$

Steps  
 1) Divide  
 → 2) Determine Sign

- Divide integers with the same sign:

$$1. 35 \div 5 = 35 \div 5 = +7$$

$+ \div +$

$$2. -27 \div -9 = 27 \div 9 = +3$$

$- \div -$

$$3. \frac{-39}{-3} = \frac{39}{3} = +13$$

$- \div -$

- Divide integers with different signs:

$$1. 63 \div (-7) = 63 \div 7 = 9$$

$+ \div -$

$$2. \frac{-110}{11} = 110 \div 11 = -10$$

$- \div +$

$$3. -300 \div 6 = 300 \div 6 = -50$$

$- \div +$

- Evaluate algebraic expressions:  
1) Rewrite replacing variables

$$1. \text{ Evaluate } 12y \div x, \text{ if } x = -6 \text{ and } y = -3$$

$$\left[ \frac{12 \cdot (-3)}{-6} \right] \div (-6) = \frac{12 \cdot 3 = 36}{36 \div 6 = +6} \div (-6)$$

Mean: Average  $\frac{\text{Add all #'s}}{\text{Total #'s}}$

- 1. Susan has scores of -3, -2, 1, and 0 during 4 rounds of golf. Find the mean of her golf scores.

$$\frac{-3 + (-2) + 1 + 0}{4} = \frac{-5 + 1}{4} = \frac{-4}{4} = -1$$

- ▣ Class work: Page 109; 1-9 all
- ▣ Homework: Page 109; 10-30 even  
Read and take notes on pages 111-113 for  
Monday, October 10.

- ▣ Thursday, October 6, 2011
- ▣ 7A and 7B only
- ▣ SW review adding, subtracting, multiplying, and  
dividing with integers
- ▣ SW complete integer worksheet. Begin working on  
worksheet in class and finish for homework

- ▣ Use page 108 to fill in the blanks.
1. To add integers with the same sign, add their  
\_\_\_\_\_. Give the result the  
\_\_\_\_\_ sign as the integers.
  2. To add integers with different signs, \_\_\_\_\_  
their absolute values. Give the result the same sign as the  
Integer with the \_\_\_\_\_ absolute value.
  3. To subtract an integer, add its \_\_\_\_\_  
\_\_\_\_\_.
  4. The product of two integers with the same sign is  
\_\_\_\_\_.

5. The product of two integers with different signs is  
\_\_\_\_\_.
6. The quotient of two integers with the \_\_\_\_\_  
sign is positive.
7. The quotient of two integers with \_\_\_\_\_  
signs is negative.

- ▣ Friday, September 30, 2011
- ▣ No 7<sup>th</sup> grade class due to Parent/Teacher Conferences