Name:_____

CC2, Class 5, ElShakhs

Weekly Math Homework Sheet 10-28 to 11-04

Please have this homework sheet out next to your homework at the beginning of the period.

Homework Score				**Assign Date**	**Due Date**	**Section**	**Classwork**	**Homework**
100%	75%	50%	Missing					
				Mon, 10/28	Tues, 10/29	3.2.2 3.2.3	3-39, Math Notes, class notes. 3-55, 3-57	3-46, 3-48 to 3-50
				Tues, 10/29	Weds, 10/30	3.2.4	3-64 to 3-68	3-59 to 3-63,
				Weds, 10/30	Friday 11/01	3.2.5	STAR 3-78 to 3-80	3-45 and 3-58 (LL) 3-73 to 3-77
				Friday 11/01	Mon, 11/04	3.3.1	3-87, 88, 3-90, 91	3-82 to 3-86

Remember – Homework help available at www.cpm.org

Reflections on this week's homework:

Ideas or comments:

Wednesday Homework:

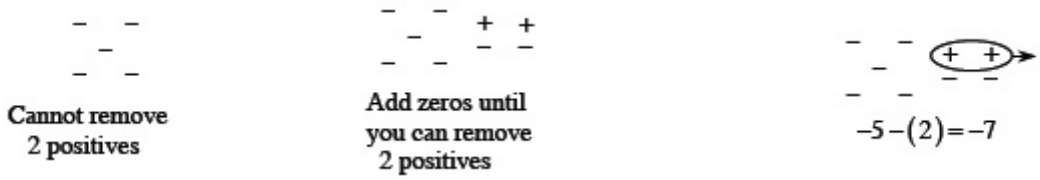
METHODS AND MEANINGS

MATH NOTES

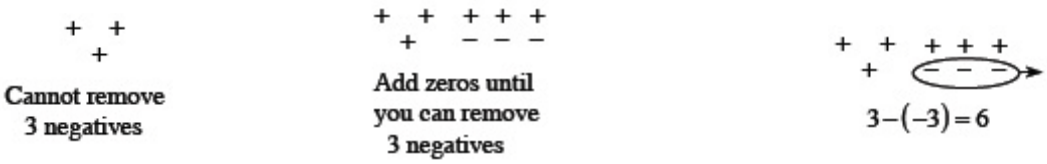
One method of adding integers,mentioned in a previous Math Notes box, was to start with a diagram of the first integer, add the second integer to the diagram, eliminate zeros, and then record what is left. One method of subtracting integers is to do the same, except that instead of adding the second integer, you remove the second integer. Sometimes this removal will require adding extra zeros to the diagram. Look at the examples below:

Example 1: $-3-(-2)$

Example 2: $-5-(2)$



Example 3: $3-(-3)$



Monday Homework: Review & Preview

3-46. Find the value of each expression below. Change any subtraction problem to an equivalent addition problem. Draw a diagram with + and − tiles to justify your answer.

a. $5 - 7$

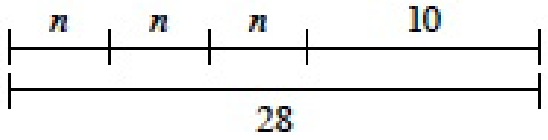
b. $-5 + (-7)$

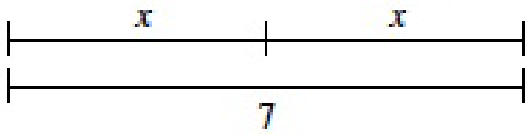
c. $-5 + 7$

d. $-5 - (-7)$

3-48. Each of the diagrams below represents tightrope moves for an acrobat. For each diagram:

- Describe what the diagram shows about the routine and the length of the tightrope.
- Figure out the length of the acrobat's trick.

a. 

b. 

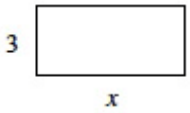
3-49. Copy each expression below and simplify it. Be sure to show the steps you use to get the answer.

a. $\frac{11}{12} - \frac{7}{12}$

b. $\frac{1}{2} + \frac{1}{8} + \frac{3}{4}$

c. $\frac{3}{4} - \frac{1}{6}$

3-50. Sketch the rectangle at right on your paper. Calculate the perimeter and area for the given *x*-values.



a. $x = 5$

b. $x = 9$

c. $x = 4.6$

Tuesday Homework

- **3-59.** Copy and simplify each expression below.

a. $6 + (-18)$

b. $12\frac{1}{2} + (-25)$

c. $-9 + (-9)$

d. $-12.2 + 6.1 + 15.8$

3-60. Find each of the following products or quotients without using a calculator. Draw a diagram or use words to explain how you know your product makes sense.

a. $6(-3)$

b. $-6(3)$

c. $-8(-3)$

d. $-8(0)$

e. $-20 \div 5$

f. $-36 \div (-9)$

3-61. Simplify each of the following expressions without using a calculator. Draw diagrams or use words to show your thinking.

a. $4(-2\frac{1}{3})+7\frac{1}{6}$

b. $-8 + -2(3)$

c. $4 + -5(-3) + (-7)$

d. $(-4.25)(2) + (-4.25)(-2)$

3-62. Simplify the following fraction expressions. Show all of your work.

a. $\frac{3}{4}+\frac{2}{3}$

b. $\frac{7}{8}-\frac{1}{4}$

c. $\frac{3}{5}\cdot\frac{1}{3}$

d. $\frac{4}{7}\cdot\frac{2}{3}$

3-63. Nathan wants you to solve this puzzle: *"I am thinking of a number. If you divide my number by 3 and add –3, you will get 4. What is my number?"* Show all of your work.

Wednesday Homework:

3-45. LEARNING LOG – Connecting Addition and Subtraction

Explain how subtraction and addition are related.

Include several examples **with diagrams** to justify your response.

3-58. LEARNING LOG - Multiplying and Dividing With Negative Numbers

Describe what you understand about the product of two negative numbers. Give two examples.

What have you learned about the product of a negative number and a positive number? Give two examples.

How does this relate to division with negatives? Give two examples.

3-73. Use what you learned during today's lesson to answer the following questions.

a. Show (2.3)(5.06) as a fraction multiplication problem and explain why the answer is in thousandths (three decimal places).

b. Show (0.004)(3.42) as a fraction multiplication problem and explain why the answer is in hundred-thousandths (five decimal places).

3-74. Mentally calculate the following products. Use the rule for decimal multiplication to write an equation in which the decimal point is written in the correct location.

a. $(-0.04)(-0.1)$

b. $(0.03)(-0.02)$

c. $(0.7)(0.4)$

Stacey said, "*Stephanie, look at my answer to the last problem,* $0.7 \cdot 0.4 = 0.28$*. Usually when I multiply, I get a bigger answer than the numbers I start with. Twenty-eight-hundredths, 0.28, is less than either 0.4 or 0.7. I must have made a mistake."*

Stephanie responded, *"Well, one-half times one-half is one-fourth, and one-fourth is less then one-half. I think when you multiply by a fraction or decimal less than one, you get less than you started with."*

Write a sentence or two about who you think is correct and why.

3-75. The highest point in the Unites States is Mount McKinley, also called Denali, in Alaska. Its summit is 20,335 feet above sea level. Badwater, a basin located in Death Valley, is the lowest point in the United States at 282 feet *below* sea level. How high is the summit of Denali above the Death Valley location? Show your calculation using absolute value symbols.

3-76. Find the mean, range, and median of the values: 12, 4, −2, 0, 9, −2, 1, 7, 8, 2. Recall that the range is calculated by finding the difference between the largest and smallest data values.

3-77. Simplify each multiplication problem below.

a. $\frac{5}{8} \cdot \frac{2}{3}$

b. $\frac{3}{4} \cdot \frac{2}{5}$

Multiplication of Integers

METHODS AND MEANINGS
MATH NOTES

Multiplication by a positive integer can be represented by combining groups of the same number:

$$(4)(3) = 3 + 3 + 3 + 3 = 12 \text{ and } (4)(-3) = -3 + (-3) + (-3) + (-3) = -12$$

In both examples, the 4 indicates the number of groups of 3 (first example) and –3 (second example) to combine.

Multiplication by a negative integer can be represented by removing groups of the same number:

$(-4)(3) = -(3) - (3) - (3) - (3) = -12$ means "remove four groups of 3."

$(-4)(-3) = -(-3) - (-3) - (-3) - (-3) = -12$ means "remove four groups of −3."

In all cases, if there are an *even* number of negative factors to be multiplied, the product is *positive*; if there are an *odd* number of negative factors to be multiplied, the product is *negative*.

This rule also applies when there are more than two factors. Multiply the first pair of factors, then multiply that result by the next factor, and so on, until all factors have been multiplied.

$(-2)(3)(-3)(-5) = -90$ and $(-1)(-1)(-6) = 12$

METHODS AND MEANINGS
MATH NOTES

Multiplicative Inverses and Reciprocals

Two numbers with a product of 1 are called **multiplicative inverses**.

$\frac{8}{5} \cdot \frac{5}{8} = \frac{40}{40} = 1$ $\quad 3\frac{1}{4} = \frac{13}{4}$, so $3\frac{1}{4} \cdot \frac{4}{13} = \frac{13}{4} \cdot \frac{4}{13} = \frac{52}{52} = 1$ $\quad \frac{1}{7} \cdot 7 = 1$

In general $a \cdot \frac{1}{a} = 1$ and $\frac{a}{b} \cdot \frac{b}{a} = 1$, where neither a nor b equals zero. You can say that $\frac{1}{a}$ is the **reciprocal** of a and $\frac{b}{a}$ is the reciprocal of $\frac{a}{b}$. Note that 0 has no reciprocal.

Friday Homework:

3-82. Simplify each expression without using a calculator. For each expression, draw a diagram or use words to explain how you know your answer makes sense.

a. $-8 \div -4$

b. $18 \div -3$

c. $-24 \div 2$

d. $17 \div -1$

3-83. Follow the order of operations (use circling the terms if it is helpful) to simplify the following expressions:

a. $-7 + 4 \div (-2)$

b. $17.5 \div (-7) + -8.1(2)$

c. $(8 + -3)(-5\frac{3}{5})$

d. $(4 - (-3)) + (5 \div (-5))$

3-84. Read the Math Notes box in this lesson. Use the information to find the multiplicative inverse, or reciprocal, of each number below.

a. $\frac{7}{13}$

b. $\frac{1}{5}$

c. 2

d. $2\frac{5}{8}$

e. Check your answers by multiplying the given number with your answer and verifying that the product of the numbers is 1.

3-85. Write at least three expressions that use each of the numbers:

<u>2, 3, 6, and 8</u> only once, and any operations and grouping symbols (addition, subtraction, multiplication, division, and parentheses).

Each expression should have a different value, with one being equal to 28.

a.

b.

c.

3-86. Copy and complete each problem mentally.

a. $\frac{5}{7} \cdot \frac{7}{5} = \square$

b. $\frac{8}{13} \cdot \boxed{-} = 1$

c. $\boxed{-} \cdot \frac{31}{27} = 1$

d. $\frac{5}{\square} \cdot \frac{2}{\square} = 1$

e. What do all of the problems have in common?