Name: Ans. Key Date: Per:

Math 7 Unit 2 Study Guide

Directions: No Calculator! Answer each question completely. Show ALL work to defend your answers.

1. Calculate the following, then place the answers in order from least to greatest.

a. $-20 + 6$ KCC $-20 + -6 = -26$

b. $-2 + (+12)$ KCC $-2 + 12 = 10$ $12 - 2 = 10$

c. $-5(-2) - 9(9)$ $10 + 81$ KCC $10 + (-81) = -71$ $81 - 10 = 71$

least → greatest

-71 -26 0 10

$-71, -26, 10$

2. Show a diagram of +'s and –'s that each expression could represent then find the value of the expression.

a. $-4 + 7 + (-2) =$ 1

b. $6(-2) =$ -12 groups

c. $3 + (-8) + 4 =$ -1

d. $3(-7) =$ -21 groups

4. Solve the diamond problems below:

1) $-3(17)$ -51 | -3 | 17 | 14 | $-3 + 17 = 14$

2) $-14(6)$ -84 | -14 | 6 | -8 | $-14 + 6 = -8$

3) $-6(2)$ -12 | -6 | 2 | -4 | $-6 + 2 = -4$

product | # | # | sum | +

5. Find the value of the following expressions.

KCC

a. $15 + 21 =$ -6

b. $11 + (-6) =$ 5 $11 - 6 = 5$

i. $4 \cdot (-5) =$ -20

j. $16 \div (-4) =$ -4

c. $(-8) + (-10) =$ 2 (KCC)

d. $(-8) + (-10) =$ -18

e. $21 - 15 =$ 6

f. $(-11) + 6 =$ -17 (KCC)

g. $(-6) + (-9) =$ 3 (KCC)

h. $6 + (-9) =$ -3

k. $(-5) \cdot (-6) =$ 30

l. $(-16) \div (-2) =$ 8

m. $(-7) \cdot 3 =$ -21

n. $(-50) \div 5 =$ -10

o. $6 \cdot 3 =$ 18

p. $30 \div 10 =$ 3

6. Mrs. Mahar made an error when she was adding fractions. Check over the steps she used to solve the problem. Identify and explain the error to Mrs. Mahar. Then rework the problem correctly.

Find and tell

$$\frac{2}{3} + \frac{4}{5} = \frac{6}{15}$$

15 15

Identify and Explain the Error

Mrs. Mahar found a common denominator, but she did not multiply the fractions by the giant one to find equivalent fractions.

Rework the problem

$\frac{2}{3} \cdot \boxed{\frac{5}{5}} = \frac{10}{15}$

$+\frac{4}{5} \cdot \boxed{\frac{3}{3}} = +\frac{12}{15}$

$\frac{22}{15} = 1\frac{7}{15}$

Review & Remember: Ms. Dudley reached into a bag, recorded the color of the tile she picked, returned the tile and drew again. These are the tiles she has drawn so far:

4 red + 1 yellow = 5 total = 10

red, red, blue, yellow, blue, red, green, red, blue, green

Based on this data, what is the probability that her next draw will be red or yellow? Explain how you know.

P(red or yellow) = $\frac{5}{10}$ or $\frac{1}{2}$ *I know that the probability of drawing red or yellow is* 5/10 *because* there are ten tiles total, and 5 are red or yellow.