Name _____   Period _____   Date_____

RATIO REPRESENTATIONS (PR1)
Essentials Pre-Assessment

1. Tiana wants to paint her room orange. In order to make the right color orange, she mixes two parts red with six parts yellow.

    a. Create a tape diagram to represent Tiana's orange paint mixture.

   b. How many parts of red paint does she need if she wants to make 64 total parts?

2. Using the table to the right, do the numbers in the rows represent equivalent ratios? _____ Explain.

	Number of pencils	Number of rulers
Period 1	58	29
Period 2	27	27
Period 3	74	37

3. Murphy walks 8 miles every 2 hours.

    a. Create a double number line to represent this situation.

    b. How many miles does he walk per hour?

    c. At that rate, how many hours will it take Murphy to walk 21 miles?

4. Buster gets $60 in allowance every four weeks. He is saving all of his allowance to buy a game system that costs $360. How many weeks will it take him to save up enough money for the system? Use a table, tape diagram, or double number line to show your reasoning.

5. Sonia and Carlos are shopping in the grocery store. They see the sign that says "10 pounds of apples for $4.00." Sonia says that the sign means you can get $2\frac{1}{2}$ pounds of apples for one dollar. Carlos says Sonia is wrong and that the sign means it cost $0.40 per one pound of apples. Who is correct Sonia, Carlos or both of them? Explain.

Name _____   Period _____   Date_____

PERCENTS (PR2)
Essentials Pre-Assessment

6. The drawing below represents a garden. The shaded part is planted.
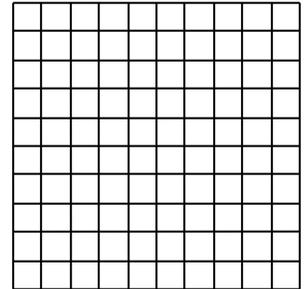
a. What fractional part is planted?

b. Color the hundred-square so that the same fractional part is planted.

c. Write the part that is shaded as a decimal, and percent.

7. Complete the table.

	Fraction	Decimal	Percent
a.	$\dfrac{3}{4}$		
b.		0.8	

8. Change $\dfrac{2}{7}$ to a decimal.

9. Choose all amounts that are equal to $20.

    A.   10% of $200   B.   20% of $10   C.   50% of $40   D.   25% of $80

10. Selena is buying a soccer jersey for $50. Show work.

a. If the jersey is on sale for 20% off, how much would the jersey be before sales tax?	b. If sales tax is 5%, how much would the total cost be with sales tax?

Name _____   Period _____   Date_____

INTRODUCTION TO INTEGERS (IN1)
Essentials Pre-Assessment

11. Graph and label each of the following numbers on the number line below: 5, -4, -1, 8

-8   0
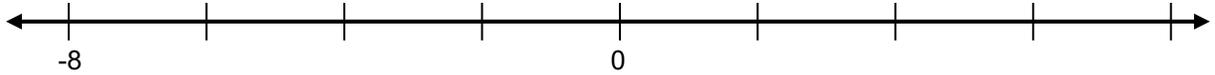
Use the number line to the right to help you complete problems 12–14.

12. Choose ALL the statements below that result in a temperature of 20°.

   A.   Start at 50°, fall 30°   B.   Start at -20°, rise 50°
   C.   Start at -10°, rise 30°   D.   Start at -5°, rise 25°

13. A freezer is kept at a temperature of   14. A cooler was -10° F but Frank left the
    -15° F. The electricity went out and 5   lid open and the temperature rose 25°
    hours later the temperature had risen   F. What is the temperature of the
    to 55° F. How much did the   cooler now?
    temperature change?

15. Write <, =, or > in the blanks to make each statement true. Then choose one and
     explain how you know your answer is correct.
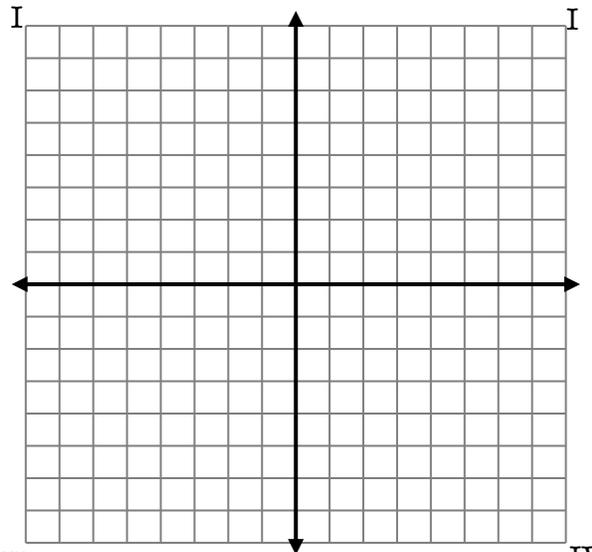
   a. $\left|-25\right|$ _____ $\left|25\right|$ b.   the opposite of 5 _____ $\left|-5\right|$

   c.   7 _____ $-\left|-7\right|$ d. $-\left|15-7\right|$ _____ $-\left|-6\right|$

16. Each small square on the grid below is one square unit.   I_____I

   a. Label the axes. Graph the origin at the
       point (0, 0) and label it *O*.

   b. Graph and label the ordered pairs below.

         A (5, -4)   *B* (-2, 0)

         C (5, 3)   *D* (-4, -6)

   *E* (3,-4)   *F* (-5, 2)

   c. Explain how you located point *F* on the
       coordinate plane.

17. List all ordered pairs (integer coordinates only) that could fit on the grid above and whose   IV
    coordinates satisfy the conditions that *x* > 3   and *y* < -7.

VARIABLES AND BALANCE (EE1)
Essentials Pre-Assessment

18. The total weight of the scale to the right (both sides together) is 44 units. The triangle weighs 16 units. Find the weight of the circle.
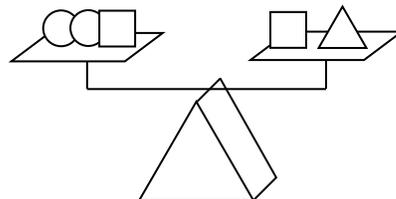
Use the menu below for problem 19.

PIZZA SHOP MENU (The variable represents the cost of an item.)	
Pizza	**Drinks**
Cheese slice (*c*) .... $1.25 Pepperoni slice (*p*) $1.75	Small drink (*s*) .... $1.00 Medium drink (*m*) .... $1.50 Large drink (*L*) $2.00

19. Find a menu item with a cost that makes the following equations true. In different problems, the ☐ need not represent the same menu item.

a. $3 \bullet \boxed{} = c + p$	Menu item: Cost of menu item:
b. $2(s + L) = 2m + p + \boxed{}$	Menu item: Cost of menu item:

20. Solve each equation. Write MM if you used mental math. Otherwise show all work.

a. $7 - x = 3$	b. $24 = n + 9$
c. $5m = 60$	d. $\dfrac{y}{6} = 8$

21. Describe in your own words the difference between an expression and an equation. Include examples.