Name_____   Block_____

Unit 4 Test

1.   A picture of the beach is 8 inches wide by 13 inches tall. If the width of poster is scaled
     to 18 inches, how tall should the poster be, round to the nearest tenth? Draw a picture to
     representing the problem. (3 pts)

2.   Simplify the following expressions: (3 pts each)

     a. $6^2 + 4 \cdot (-9 + 2) - 3$

     b.   2h - 8(-9c - 7) for c = -3 and h = 2

3.   Daniel wants to buy a phone card for long-distance calls. He can buy a 50-minute card for $6.00 or
     a 200-minute card for $21.00. (6 pts) (Round to the nearest tenth)
     Find the unit rate for both and find which card is the better value?

4.   Shelly is shopping and sees that the price of 3 baskets of cherries is $7.00. Write a proportion that Shelly can use to find the price of 13 baskets of cherries and solve it. (3 pts)

5.   Solve each equation. (3 pts each)

    a. $x - 4 = -9$ b. $x + 7 = -3$

6.   Solve. (5 pts)

Mr. Wong drove from Fresno to Bakersfield, which is a distance of 108 miles. It took him an hour and a half to get to Bakersfield and the speed limit is 65 miles per hour. How fast was Mr. Wong driving? Mr. Wong says that he did not break the speed limit, was he telling the truth?

7.   Solve each expression. (6 pts)

    a. $| 7 - 13 |$ b. $6 - 3$ c. $3 - {-6}$

    d. $-13 + 10$ e. $| 3 + {-6} |$ f. $-3 - 6$

8.   From the following table below, find mean, median, mode, and range. (5 pts)

Type Fruit	Total
Cherries	27
Oranges	13
Strawberries	15
Apples	17
Bananas	13

Mean =   _____

Median =   _____

Mode =   _____

Range =   _____

9.   Malik and Cassandra both deliver newspapers. In the first hour, Cassandra delivered 8 newspapers and Malik delivered 6. They continued to deliver newspapers at the same rate for the next 3 hours. (6 pts)

Complete the table below to show how many newspapers each delivers during the second, third, and fourth hours.

Hour	Cassandra	Malik	Total
1	8	6	
2	16		
3			
4			

How many newspapers did they deliver together for that day?

What percent of the newspapers did Malik deliver? (Round to the nearest tenth of a percent)

10. Use factor trees to solve and find the Greatest Common Factor. (5 pts)

Connor and Grace are having a party and want to make treat bags for their guests. They want each bag to be identical with nothing left over. Connor has 30 sugar cookies, and Grace bought 24 Kit Kats to put in the bags. What is the greatest number of treat bags they can make and how many of each item will be in each treat bag?

Number of treat bags: _____

Number of Kit Kats: _____

Number of Sugar Cookies: _____

Problems 11 – 14 (Graph the solutions) (4 pts)

11. -7 + 3 _____

12. -7 - 3 _____

13. -7 - -3 _____

14. 7 + -3 _____

15. If I bought a shirt for $19 and the sales tax was 7%.
    What were the tax and the total cost? (3 pts)

    _____

    _____

16. Write 0.65 as a fraction in simplest form. (2 pts)

17.	The width of Hudson's science fair poster needs to be less than 3.5 feet wide. Which of the following shows what the width could be? Select two that apply.

_____

A. 50 inches   B. 45 inches   C. 35 inches   D. 30 inches

18.	Write 4/7 as a percent. (Round to the nearest tenth of a percent) (2 pts)

_____

19.	Change all the rational numbers to decimals and put them in order. (3 pts)

$$\frac{2}{5}, -1.3, -1\frac{3}{8}, 0.43, 20\%$$

20.	Lindsay is trying to bake brownies, and she needs $3\frac{1}{3}$ tablespoons of cocoa powder for her recipe. She only has a spoon that is $\frac{2}{3}$ tablespoon. How many scoops of cocoa powder does she need for her recipe? (3 pts)

21. Express each ratio in original form and reduce your ratios if possible. (4 pts)

Squares to all shapes: _____ ♠ ♠ ■ ■

Spades to stars: _____ ♠ ♠ ♠ ■

22. The Bairdtown football team outscored its opponents 8:5 last season. If there was 78 points scored in total last season, how many points did Bairdtown score? Use a proportion to solve. (4 pts)

$$\frac{\boxed{}}{\boxed{}} \quad \frac{\quad}{\quad} = \frac{\quad}{\quad}$$

23. Solve each fraction. (2pts each)

$2\frac{1}{5} + 3\frac{5}{7}$ $4\frac{1}{4} - 1\frac{4}{7}$

$2\frac{3}{4} \cdot 1\frac{1}{3}$ $2\frac{5}{7} \div \frac{2}{5}$