



NAME _____

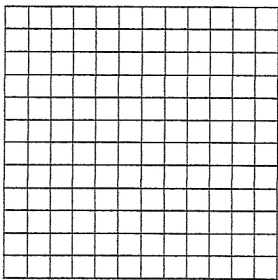
DATE _____

PERIOD ____

**PRE-ALGEBRA ACCELERATED
TAKE HOME AND CHECK – UNIT 8
RATES, RATIOS, PROPORTIONS**

Every 6 days, Draco bakes four Cauldron Cakes. How many cakes does he make per day?

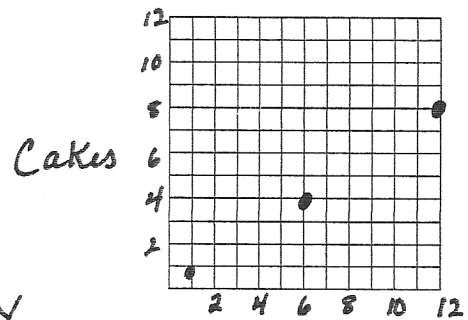
- 1) Draw a graph of the relationship described above.



- 2) Is the relationship proportional? Why or why not?
 3) Describe how to find the unit rate on the graph.
 4) What is the unit rate of this relationship?

1)

Cauldron Cakes

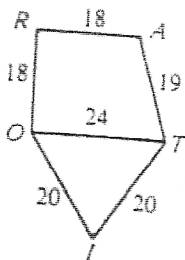


X	Y
1	$\frac{2}{3}$
2	
3	
4	
5	
6	4

$$\frac{4}{6} = \frac{2}{3} \text{ cake}$$

- 2) Yes
 3) 1 day = $\frac{2}{3}$ cake
 4) $\frac{2}{3}$ cake

Use the figure shown to find each ratio in simplest form.



5) $\frac{RA}{TO}$ (RA = 18)

$$5) \frac{18}{24} = \frac{3}{4}$$

6) $\frac{TO}{OI + TI}$

7) RO: AT

8) $\frac{RA + OT}{IT}$

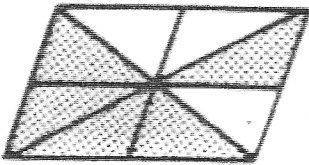
6) $\frac{24}{20+20} = \frac{24}{40} = \frac{3}{5}$

7) $18:19 = \frac{18}{19}$

8) $\frac{18+24}{20} = \frac{42}{20} = \frac{21}{10}$

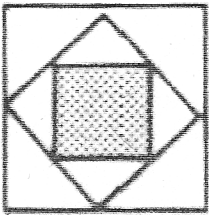
Find the ratio of the area of the shaded region to the total area.

9)



9) 5 : 8

10)



10) 1 : 4

Solve the proportion.

11) $\frac{r}{6.5} = \frac{.2}{1.3}$

11) $1.3r = 1.3$

$r = 1$

12) $\frac{30}{14} = \frac{k}{1.54}$

12) $14k = 46.2$

$k = 3.3$

- 13) Gayle is making fruit punch that consists of 2 quarts of juice and 1 quart of soda water. How much soda water does she need if she has 5 quarts of juice? Show the work!

$$13) \frac{2}{1} = \frac{5}{x}$$

$$2x = 5$$

$$x = 2\frac{1}{2} \text{ qts}$$

- 14) The Carmona Construction Company is laying a brick patio. Thirty rows of bricks have been installed. Twenty more rows are needed to finish the job. If 600 bricks have already been used, how many will be used for the entire job?

$$14) \frac{30}{50} = \frac{600}{x}$$

$$30x = 30000$$

$$x = 1000 \text{ bricks}$$

- 15) The Preussen was the largest sailing ship ever built. Built in Germany in 1902, it had 5 masts and could carry 7300 metric tons of cargo. The Preussen was 433 feet long and 54 feet wide. How wide should a model that is 26 inches long be?

$$15) \frac{433}{54} = \frac{26}{x}$$

$$433x = 1404$$

$$x = 3.24''$$

Complete each statement.

16) If $\frac{t}{18} = \frac{1}{3}$, then $\frac{18}{t} =$ _____

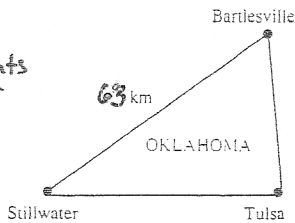
16) $\frac{18}{t} = \frac{3}{1}$

17) If $\frac{p}{q} = \frac{9}{10}$, then _____ = $\frac{10}{9}$

17) $\frac{q}{p} = \frac{10}{9}$

Use the diagram below.

Make your measurements to the closest cm.



- 18) Measure the map distance between Bartlesville and Stillwater to the nearest centimeter. Then give the scale of the map.

18) 3.5 cm ; $\frac{63 \text{ km}}{3.5 \text{ cm}}$
 $= \boxed{1 \text{ cm} = 18 \text{ km}}$

- 19) Find the actual distance between Stillwater and Tulsa.

19) $\frac{1}{18} = \frac{3}{x}$
 $\boxed{x = 54 \text{ cm}}$

- 20) Find the actual distance between Bartlesville and Tulsa.

20) $\frac{1}{18} = \frac{2}{x}$
 $\boxed{x = 36 \text{ km}}$