

Name \_\_\_\_\_

Date \_\_\_\_\_

Period \_\_\_\_\_

# **TAKE HOME AND CHECK** **UNIT 8 Regular** **RATES, RATIO, PROPORTIONS**

Simplify.

1)  $\frac{22 \text{ sec}}{2 \text{ sec}}$

2)  $\frac{\$372}{2 \text{ weeks}}$

3) 82 miles per 4 hours

4) 30 ft : 5 ft

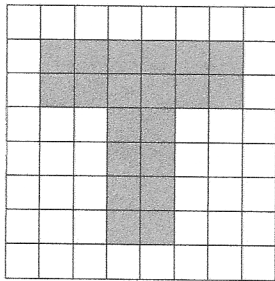
Solve the problems.

- 5) It took the Richardsons 4 hours to travel 300 km. If they maintain a constant speed, how far can they travel in 10 hours?

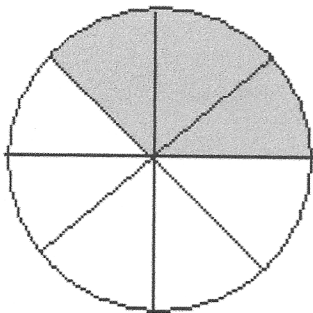
- 6) The ratio of girls to boys at Southwest High School is  $6 : 5$ . If there are 975 Boys, how many girls are there?

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

7)



8)



Solve the proportion.

9)  $\frac{r}{6.5} = \frac{0.2}{1.3}$

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

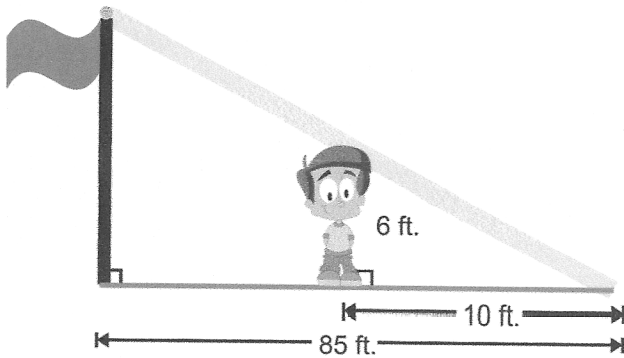
- 11) Gayle is making fruit punch that consists of 2 quarts of juice and 1 quart of soda water. How much soda water does she need if she has 5 quarts of juice? Show the work!

Complete the statement.

12) If  $\frac{t}{18} = \frac{1}{3}$ , then  $\frac{18}{t} = \underline{\hspace{2cm}}$

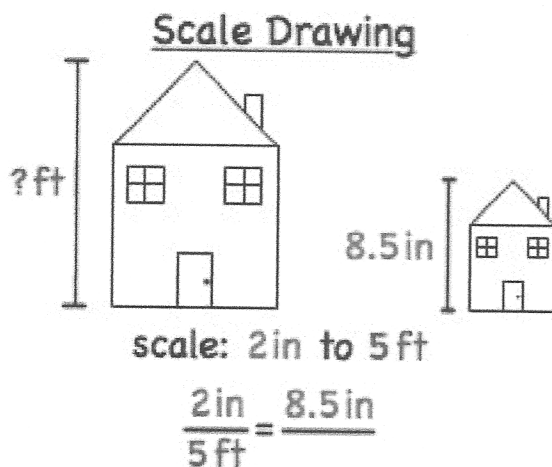
13) If  $\frac{p}{q} = \frac{9}{10}$ , then  $\underline{\hspace{2cm}} = \frac{10}{9}$

14) How tall is the flagpole? Show the work.



15) The height of a building in an architectural drawing is 10 inches. Its actual height is 150 ft. What is the scale of the drawing?

16) Given the scale, find the height of the larger house.



- 17) The map below shows some towns in Massachusetts.

Area Map

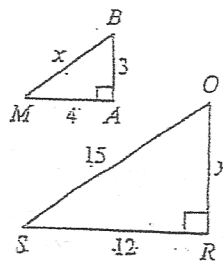


The actual distance between Needham and Medfield is 9 miles. Which scale is most appropriate for this map?

- A) 1 cm = 10 miles      B) 1 cm = 8 miles  
C) 1 cm = 2 miles      D) 1 cm = 5 miles

Find the lengths marked  $x$  and  $y$ .  
Show your work.

- 18)  $\triangle MAB \sim \triangle SRO$



- 19)

$\triangle PAR \sim \triangle PBT$

