Name_____ Period _____ Date_____

Algebra 1 Chapter 4 Test (A) Review

Find each unit rate. Label answers!!

1. 248 miles in 4 hours.

2. $5.25 for 5 pounds

Complete the statement, show all conversion factors in your expression.

3. 600 sec = _____ hrs

4. If you are driving 65 mi/h, how many feet per second are you driving? 65mi/h = _____ft/sec

Solve each proportion. Show work.

5. $\frac{t}{4} = \frac{15}{10}$

6. $-\frac{6}{8} = \frac{p}{12}$

7. $\frac{x+3}{6} = \frac{4}{10}$

8. $\frac{x+5}{4} = \frac{x+8}{10}$

Write a proportion, then solve.

9. What is $33\frac{1}{3}\%$ of 360?

10. What percent of 80 is 24?

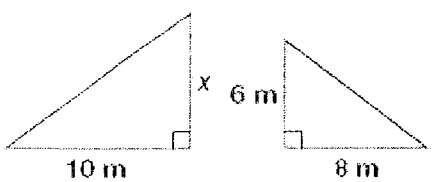
11. 16 is what percent of 20?

12. 80 is 20% of what number?

13. Suppose you invested $1200 (principal) for five years (time). You earned $600 in simple interest at the end of five years. What is the annual interest rate? Use $I = Prt$, where I = simple interest, P = principle, r = annual interest rate and t = time in years. **Show work!!**

Write a proportion, then solve.

14. The pair of figures is similar. Find the length of x.



15. The scale of a map is 1 cm:50 mi. Determine the distance between two cities that are 4.2 cm apart on the map.

Write a <u>proportion</u>, then solve.

16. If a person can walk 4 miles in 14 minutes, how long will it take them to travel 22 miles if they continue at this same rate?

17. A 5-ft person casts a shadow of 24 inches long. A nearby tree casts a shadow of 64 feet. How tall is the tree?

For problems 18-21, find each probability. A bank contains five dimes, seven nickels, and three quarters. Two coins are selected at random. **Show individual probabilities!**

18. *P*(quarter and quarter) with replacing

19. *P*(dime then nickel) without replacing

20. *P*(dime and quarter) with replacing

21. *P*(quarter then quarter) without replacing

22. a) Quality control inspected 500 belts at random. They found no defects in 485 belts. What is the probability that a belt was selected at random will pass quality control?

b) Using the above probability. If the belt manufacturer had 6258, predict how many belts are likely to have no defects?

Bonus: **Complete the statement, show all conversion factors in your expression.**
12 gallons/week = _____ quarts/hour