

Name _____

Ratios and Proportions Quiz

Remember to show all work and simplify all answers.

For problems 1-4, solve each proportion.

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

2. $\frac{2}{1.2} = \frac{5}{k}$

3. $\frac{(x+2)}{6} = \frac{(x-1)}{12}$

4. $\frac{(d-4)}{(d+2)} = \frac{1}{3}$

For problems 5-6, write an equation and solve.

5. What is 35% of 360?

6. What percent of 80 is 24?

For problems 7-8, find each percent of change and tell whether it is an increase or decrease.

7. 25 ft to 15 ft

8. 28 cm to 35 cm

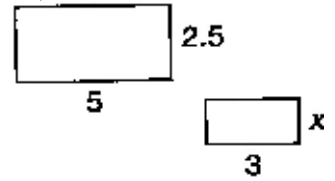
For problems 9-10, use dimensional analysis to solve.

9. $65 \frac{\text{miles}}{\text{hr}} = \frac{\text{ft}}{\text{sec}}$

10. $3 \frac{\text{m}}{\text{sec}} = \frac{\text{km}}{\text{min}}$

11. Find the unit rate for \$6.69/3 lb.

12. Solve for x in the figure below:
(the rectangles are similar)



13. The ratio of the number of right-handed students to left-handed students is $\frac{11}{2}$. If there are 38 left-handed students, how many students are right-handed?

14. A coin is tossed three times. What is the probability of getting 3 tails in a row?

15. A bank contains four dimes, seven nickels, and three quarters. Two coins are selected at random. Find each probability.

a) P(quarter and dime) with replacement

b) P(dime then nickel) without replacement

Colored golf balls were selected at random from a box. Use the data below to find each probability.

					X
					X
			X		X
X			X		X
X	X		X		X
X	X		X	X	X
BLACK	RED	BLUE	YELLOW	GREEN	

16. $P(\text{red})$ 17. $P(\text{blue or green})$ 18. $P(\text{not black})$
19. A 6-ft-tall man casts an 8-ft shadow. A tree next to the man casts a 20-ft shadow. How tall is the tree?
20. BONUS!! Megan needs to find out how tall a tree is. She knows her shadow is 10 feet $7\frac{1}{2}$ inches long, and she knows she is 5 inches shorter than Mark. If Mark has an 11 foot 8 inch shadow and the tree has a shadow of 110 feet, how tall is the tree?