

Algebra 2
Section 2.2 Proportional Reasoning

Name _____ Period _____

Use proportions to solve each problem. Show or justify your work even if you used mental math or a calculator.

1. $\frac{3x}{15} = \frac{3}{5}$

2. $\frac{9.5}{3} = \frac{6+m}{6}$

3. $\frac{-1}{9} = \frac{1.5}{3-x}$

4. Six men can build a house in 3 days. Assuming that all of the workmen work at the same rate, how many men would it take to build the house in one day.

5. Eighty candies will be divided between two boys in the ratio 2:3. How many will each boy receive?

6. Between them, John and Mark have 32 marbles. John has 3 times as many marbles. How many marbles does each boy have?

7. If 5 chocolates cost \$.75, how much do 13 cost?

8. Jane loves to read. She can read a chapter in about 30 minutes. Assuming chapters are all about the same length, how long will it take her to read a book with 14 chapters?

9. Six students were given 20 minutes to clean up the classroom after an eraser fight. They were angry and named 3 other accomplices. The principal added their friends to the clean-up crew and changed the time limit. How much time did she give them to complete the job?

10. Sandra wants to buy a iPod costing \$210. Her mother agreed to pay \$5 for every \$2 Sandra saved. How much did each pay?

11. A company usually sends 9 men to install a security system in an office building, and they do it in about 96 minutes. Today, they have only three men to do the same size job. How much time should be scheduled to complete the job?

12. A motor bike can run for 10 minutes on \$.30 worth of fuel. How long could it run on \$1.05 worth of fuel?

13. There are 372 students, or 30% of the student enrollment, in the 10th grade at Highland School. What is the total student enrollment at the school?

14. Elijah is 5 feet 6 inches tall. He casts a shadow that is 20 feet long. He is standing next to a palm tree that casts a shadow that is 76 feet 6 inches long. How tall is the pine tree to the nearest foot?