

RATIO AND PROPORTION - Word Problems

A proportion is a statement of equality between 2 ratios.

- To solve:
1. Write the ratio in words
 2. Set up the proportion using that ratio
 3. Solve by cross multiplying or equal fractions

Example: There are 3 girls for every 4 boys on the bus, if there are 39 girls, how many boys are there on the bus?

$$\frac{\text{girls}}{\text{boys}}; \frac{3}{4} = \frac{39}{x};$$
$$3x = 4(39)$$
$$x = 52$$

Solve, using a proportion.

1. If 8 cases of merchandise cost \$60, what would a dozen cases cost?

2. Benito saves \$6 out of every \$20 he earns. He earned \$90 one month. How much did he save?

- 3^{geo}. A man who is 6 feet tall casts a shadow that is 11 feet long. At the same time, a tree casts a shadow that is 33 feet long. What is the height of the tree?
4. Mr. Savage used 3 gallons of paint to cover 1,350 square feet of wall space. At this rate, how much paint will be needed to cover 1,800 square feet?
5. In his last game, the Rams' quarterback completed 10 out of 18 passes he threw. At this rate how many passes will he attempt if he completes 15 passes?
6. Serena paid a tax of \$288 on a house assessed at \$48,000. Using the same tax rate, find the tax on a house assessed at \$59,000.

- 7*. At Kolbens Building, 3 out of every 7 employees use public transportation. There are 9,800 employees at the building. How many use public transportation?
8. At the snack bar, 7 hot dogs are sold for every 10 hamburgers sold. At this rate, how many hamburgers will be sold if 63 hot dogs are sold?
9. Jack delivered 90 circulars in 20 minutes. At this rate, how long will it take him to deliver 135 circulars?
10. At the airport, 4 planes land every 8 minutes. At this rate, how many planes will land in one hour?