

Solve each problem by setting up a proportion. You MUST show ALL work!

1. Carol spends 17 hours in a 2-week period practicing her culinary skills. How many hours does she practice in 5 weeks?

$$\frac{\text{hrs}}{\text{Wks}} \quad \frac{17}{2} = \frac{x}{5} \quad 42.5 \text{ hrs.}$$

2. In the typing world, 80 words per minute is considered acceptable. How many words per 30 minutes is this?

$$\frac{\text{Word}}{\text{time}} \quad \frac{80}{1} = \frac{x}{30} \quad 2400 \text{ words}$$

3. In a shipment of 400 parts, 14 are found to be defective. How many defective parts should be expected in a shipment of 1000?

$$\frac{\text{parts}}{\text{defective}} \quad \frac{400}{14} = \frac{1000}{x} \quad 35 \text{ parts defective}$$

4. Joseph drives 125 miles in 2.5 hours. At the same rate, how far will he be able to travel in 6 hours?

$$\frac{\text{miles}}{\text{time}} \quad \frac{125}{2.5} = \frac{x}{6} \quad 300 \text{ miles}$$

5. A rainstorm produced a rainfall of 2 inches per hour. How many hours would it take to get a rainfall amount of one foot?

$$\frac{\text{in}}{\text{time}} \quad \frac{2}{1} = \frac{12}{x} \quad 6 \text{ hrs}$$

6. A snowstorm dumped 18 inches of snow in a 12-hour period. How many inches were falling per hour?

$$\frac{\text{inch}}{\text{time}} \quad \frac{18}{12} = \frac{x}{1} \quad 1.5 \text{ inches}$$

7. It takes about me 25 minutes to make out a test for a mathematics class. How long will it take to make out tests for all five of my classes?

$$\frac{\text{min}}{\text{Class}} \quad \frac{25}{1} = \frac{x}{5} \quad 125 \text{ min or } 2 \text{ hr } 5 \text{ min}$$

8. A company's quality control department found an average of 5 defective models for every 1000 models that were checked. If the company produced 60,000 models in a year, how many of them would be expected to be defective?

$$\frac{\text{defect}}{\text{total}} \quad \frac{5}{1000} = \frac{x}{60000} \quad 300 \text{ defective}$$

9. To determine the number of deer in a forest, a forest ranger tags 280 and releases them back into the forest. Later, 405 deer are caught, out of which 45 of them are tagged. Estimate how many deer are in the forest.

$$\frac{\text{tags}}{\text{total}} = \frac{280}{x} = \frac{45}{405}$$

2520 deer

10. An employee working at an electronics store earned \$3582 for working 3 months during the summer. What did the employee earn for the first two months?

$$\frac{\$}{\text{month}} = \frac{3582}{3} = \frac{x}{2}$$

\$ 2388

11. A worker can complete the assembly of 15 Ipods in 6 hours. At this rate, how many can the worker complete in a 40-hour work week?

$$\frac{\text{ipods}}{\text{hrs}} = \frac{15}{6} = \frac{x}{40}$$

100 ipods

12. The ratio of men to women in a class is 6 to 5. How many women students are there if there are 3600 men?

$$\frac{\text{men}}{\text{women}} = \frac{6}{5} = \frac{3600}{x}$$

3600 women

13. If 3 pounds of apples costs \$0.90, how much will 10 pounds cost?

$$\frac{\text{lbs}}{\text{cost}} = \frac{3}{.90} = \frac{10}{x}$$

\$ 3

14. You find that your watch gains 2 minutes in 6 hours. How much will it gain in 3 days?

$$\frac{\text{gain}}{\text{hrs}} = \frac{2}{6} = \frac{x}{72}$$

24 min. gained

15. Sirloin steak costs \$2.99 per pound. How much will 3.4 pounds cost?

$$\frac{\text{Cost}}{\text{lb}} = \frac{2.99}{1} = \frac{x}{3.4}$$

\$ 10.17

16. A doctor sees each of her patients for 25 minutes during a typical appointment. How many patients can she see in a typical 7.5 hour day?

$$\frac{\text{min}}{\text{patients}} = \frac{25}{1} = \frac{450}{x}$$

18 patients