

L1 - Solving Percent Problems using Proportions Worksheet

Name: Key
Date: _____ Section: _____

REMEMBER:

- "OF" number is always behind the word of
- "%" number is the number with the percent sign
- "IS" number will be in front of the word is or behind the word is

!! PROPORTION !!

$$\frac{\text{is}}{\text{of}} = \frac{\%}{100}$$

* If you are solving for a percent, make sure to put a % on

Write a proportion and then solve it for each problem. Be sure to show all the steps for solving a proportion. If necessary, round answers to the nearest tenth.

1. What number is 70% of 45?

$$\frac{X}{45} = \frac{70}{100}$$

$$100x = 45 \cdot 100$$

$$\frac{100x}{100} = \frac{4500}{100}$$

$$x = 45$$

1. X = 45

2. 23% of 75 is what number?

$$\frac{X}{75} = \frac{23}{100}$$

$$100x = 75 \cdot 23$$

$$\frac{100x}{100} = \frac{1725}{100}$$

$$x = 17.25$$

2. X = 17.25

3. 45 is what percent of 90?

$$\frac{45}{90} = \frac{X}{100}$$

$$90x = 45 \cdot 100$$

$$\frac{90x}{90} = \frac{4500}{90}$$

$$x = 50\%$$

3. X = 50%

4. What percent of 77 is 7?

$$\frac{7}{77} = \frac{X}{100}$$

$$77x = 7 \cdot 100$$

$$\frac{77x}{77} = \frac{700}{77}$$

$$x = 9.\overline{099}\%$$

4. X = 9.\overline{099}\%

5. 15 is 25% of what number?

$$\frac{15}{X} = \frac{25}{100}$$

$$25x = 15 \cdot 100$$

$$\frac{25x}{25} = \frac{1500}{25}$$

$$x = 60$$

5. X = 60

6. 18% of what number is 43?

$$\frac{43}{X} = \frac{18}{100}$$

$$18x = 43 \cdot 100$$

$$\frac{18x}{18} = \frac{4300}{18}$$

$$x = 238.\overline{8}$$

6. X = 238.\overline{8}

7. What number is 75% of 125?

$$\frac{x}{125} = \frac{75}{100}$$

$$100x = 125 \cdot 75$$

$$\frac{100x}{100} = \frac{9375}{100}$$
$$x = 93.75$$

7. $x = 93.75$

8. 60 is what percent of 25?

$$\frac{60}{25} = \frac{x}{100}$$

$$25x = 60 \cdot 100$$

$$\frac{25x}{25} = \frac{6000}{25}$$
$$x = 240\%$$

8. $x = 240\%$

9. 39 is 150% of what number?

$$\frac{39}{x} = \frac{150}{100}$$

$$150x = 39 \cdot 100$$

$$\frac{150x}{150} = \frac{3900}{150}$$
$$x = 26$$

9. $x = 26$

10. What percent of 752 is 25?

$$\frac{25}{752} = \frac{x}{100}$$

$$752x = 25 \cdot 100$$

$$\frac{752x}{752} = \frac{2500}{752}$$
$$x = 3.32\%$$

10. $x = 3.3\%$
* Round to nearest tenth!
 $3.\underline{3}2 = 3.3\%$

11. 95% of what number is 19?

$$\frac{19}{x} = \frac{95}{100}$$

$$95x = 19 \cdot 100$$

$$\frac{95x}{95} = \frac{1900}{95}$$
$$x = 20$$

11. $x = 20$

12. 0.5% of 490 is what number?

$$\frac{x}{490} = \frac{0.5}{100}$$

$$100x = 490 \cdot 0.5$$

$$\frac{100x}{100} = \frac{245}{100}$$
$$x = 2.45$$

12. $x = 2.45$

13. In part because of the popularity of outlet malls, about 300 of the 1800 traditional retail malls across the United States may close in the next few years. Find the percent of retail malls that may close?

$$\frac{300}{1800} = \frac{x}{100}$$

$$1800x = 300 \cdot 100$$

$$\frac{1800x}{1800} = \frac{30000}{1800}$$

$$x = 16.\bar{6}\%$$

X