

Percent of a Number

*estimate first!

1. 25% of 36

$$\frac{25}{100} * \frac{36}{1} = .25 * 36 = \boxed{9}$$

2. 70% of 70

$$\frac{70}{100} * \frac{70}{1} = .7 * 70 = \boxed{49}$$

3. 75% of 80

$$\frac{75}{100} * \frac{80}{1} = .75 * 80 = \boxed{60}$$

Solving Percent Problems with Proportions

$$\frac{\%}{100} = \frac{\text{Part}}{\text{whole}}$$

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

1. What percent of 72 is 54?

$$\frac{x}{100} = \frac{54}{72}$$

$$72x = 5400$$

$$x = 75$$

$$\boxed{75\%}$$

2. What number is 65% of 120?

$$\frac{65}{100} = \frac{x}{120}$$

$$100x = 7800$$

$$x = 78$$

$$\boxed{78}$$

3. 18 is 45% of what number?

$$\frac{45}{100} = \frac{18}{x}$$

$$45x = 1800$$

$$x = 40$$

$$\boxed{40}$$

The Percent Equation

$$a = p\% \cdot b$$

- 1) What number is 16% of 75?

$$X = .16 \cdot 75$$

$$X = 12$$

- 2) 51 is 75% of what number?

$$\frac{51}{.75} = .75 \cdot X$$

$$68 = X$$

- 3) What percent of 48 is 45?

$$\frac{X}{100} \cdot 48 = \frac{45}{48} \Rightarrow \frac{(100)X}{100} = .9375(100) \Rightarrow X = 93.75\%$$

- 4) Your friend paid \$17 for a shirt. The amount is 85% of the total amount your friend spent at the clothing store. How much money did your friend spend?

$$\frac{17}{.85} = .85 \cdot X$$

$$\$20 = X$$

- 5) You pay \$1.50 in sales tax on a \$25 purchase. About what percent of the total purchase was the sales tax?

$$\frac{X}{100} \cdot 25 = 1.50 \Rightarrow \frac{(100)X}{100} = .06(100) \Rightarrow X = 6\%$$

Homework: