

## Finding a Percent of a Number (Using Fraction Form)

P-FPN 1

**Instructions:** Use the fraction form of the percent to solve each problem.

- 1 What is 30% of 20?

$$30\% \times 20$$

$$\frac{30}{100} \times \frac{20}{1} = \frac{600}{100} = 6$$

- 2 What is 40% of 10?

$$40\% \times 10$$

$$\frac{40}{100} \times \frac{10}{1} = \frac{400}{100} = 4$$

- 3 What is 60% of 30?

$$60\% \times 30$$

$$\frac{60}{100} \times \frac{30}{1} = \frac{1800}{100} = 18$$

- 4 What is 70% of 20?

$$70\% \times 20$$

$$\frac{70}{100} \times \frac{20}{1} = \frac{1400}{100} = 14$$

- 5 What is 10% of 50?

$$10\% \times 50$$

$$\frac{10}{100} \times \frac{50}{1} = \frac{500}{100} = 5$$

- 6 What is 40% of 50?

$$40\% \times 50$$

$$\frac{40}{100} \times \frac{50}{1} = \frac{2000}{100} = 20$$

- 7 What is 80% of 30?

$$80\% \times 30$$

$$\frac{80}{100} \times \frac{30}{1} = \frac{2400}{100} = 24$$

- 8 What is 30% of 30?

$$30\% \times 30$$

$$\frac{30}{100} \times \frac{30}{1} = \frac{900}{100} = 9$$

- 9 What is 90% of 40?

$$90\% \times 40$$

$$\frac{90}{100} \times \frac{40}{1} = \frac{3600}{100} = 36$$

- 10 What is 15% of 20?

$$15\% \times 20$$

$$\frac{15}{100} \times \frac{20}{1} = \frac{300}{100} = 3$$

## Finding a Percent of a Number (Using Fraction Form) - Set 2

P-FPN 2

**Instructions:** Use the fraction form of the percent to solve each problem.

**1** What is 25% of 40?

$$25\% \times 40$$

$$\frac{25}{100} \times \frac{40}{1} = \frac{1000}{100} = 10$$

**2** What is 10% of 30?

$$10\% \times 30$$

$$\frac{10}{100} \times \frac{30}{1} = \frac{300}{100} = 3$$

**3** What is 15% of 20?

$$15\% \times 20$$

$$\frac{15}{100} \times \frac{20}{1} = \frac{300}{100} = 3$$

**4** What is 12% of 50?

$$12\% \times 50$$

$$\frac{12}{100} \times \frac{50}{1} = \frac{600}{100} = 6$$

**5** What is 5% of 80?

$$5\% \times 80$$

$$\frac{5}{100} \times \frac{80}{1} = \frac{400}{100} = 4$$

**6** What is 7% of 400?

$$7\% \times 400$$

$$\frac{7}{100} \times \frac{400}{1} = \frac{2800}{100} = 28$$

**7** What is 2% of 150?

$$2\% \times 150$$

$$\frac{2}{100} \times \frac{150}{1} = \frac{300}{100} = 3$$

**8** What is 6% of 150?

$$6\% \times 150$$

$$\frac{6}{100} \times \frac{150}{1} = \frac{900}{100} = 9$$

**9** What is 25% of 200?

$$25\% \times 200$$

$$\frac{25}{100} \times \frac{200}{1} = \frac{5000}{100} = 50$$

**10** What is 25% of 4?

$$25\% \times 4$$

$$\frac{25}{100} \times \frac{4}{1} = \frac{100}{100} = 1$$

## Finding a Percent of a Number (Using Decimal Form)

P-FPN 3

**Instructions:** Use the decimal form of the percent to solve each problem. You can use a **calculator** to do the decimal multiplication. Your answers may be decimal numbers.

- 1 What is 22% of 80?

$$22\% \times 80$$

$$0.22 \times 80 = 17.6$$

- 2 What is 14% of 30?

$$14\% \times 30$$

$$0.14 \times 30 = 4.2$$

- 3 What is 36% of 45?

$$36\% \times 45$$

$$0.36 \times 45 = 16.2$$

- 4 What is 55% of 50?

$$55\% \times 50$$

$$0.55 \times 50 = 27.5$$

- 5 What is 85% of 80?

$$85\% \times 80$$

$$0.85 \times 80 = 68$$

- 6 What is 45% of 30?

$$45\% \times 30$$

$$0.45 \times 30 = 13.5$$

- 7 What is 14% of 25?

$$14\% \times 25$$

$$0.14 \times 25 = 3.5$$

- 8 What is 33% of 140?

$$33\% \times 140$$

$$0.33 \times 140 = 46.2$$

- 9 What is 39% of 110?

$$39\% \times 110$$

$$0.39 \times 110 = 42.9$$

- 10 What is 95% of 220?

$$95\% \times 220$$

$$0.95 \times 220 = 209$$

## Finding a Percent of a Number: Word Problems

P-FPN 4

**Instructions:** Use what you learned about finding a percent of a number to solve each word problem. You can use either the fraction form or the decimal form of the percent, depending on which seems easier. Use a calculator to do decimal multiplication if you need to.

- 1** A pie shop bakes 500 pies each week. If 40 percent of those pies are apple, how many pies are apple?

$$40\% \times 500$$

$$\frac{40}{100} \times \frac{500}{1} = \frac{20000}{100} = 200$$

or using the decimal form:

$$0.40 \times 500 = 200$$

- 2** If 25 percent of your classmates have cats, and your class has 20 students, how many students have cats?

$$25\% \times 20$$

$$\frac{25}{100} \times \frac{20}{1} = \frac{500}{100} = 5$$

or using the decimal form:

$$0.25 \times 20 = 5$$

- 3** Last week, John ran 10 miles. If John runs 35 percent farther this week, then how many *more* miles did he run this week?

$$35\% \times 10$$

$$0.35 \times 10 = 3.5 \text{ mi}$$

- 4** At Summer camp, 62 percent of the campers decide they want to go swimming instead of hiking. If there are 200 kids at the camp, how many go swimming?

$$62\% \times 200$$

$$0.62 \times 200 = 124$$

- 5** Mary's current record for her swimming race in 120 seconds. If she can reduce her time by 5%, how many seconds *less* will that be?

$$5\% \times 120$$

$$0.05 \times 120 = 6 \text{ sec}$$

- 6** If the school supplies you need cost \$25, but you have to pay 7% extra in sales tax, how much *extra* will you have to pay?

$$7\% \times 25.00$$

$$0.07 \times 25.00 = \$1.75$$

## Finding a Percent of a Number: Word Problems - Set 2

P-FPN 5

**Instructions:** Use what you learned about finding a percent of a number to solve each word problem. Many of these are two-step problems so read them carefully so you are sure what the problem is really asking you to find. You can use a calculator if you need to.

- 1** A family spends \$50 for dinner at their favorite restaurant. If they also pay a tip of 18%, what will the total cost be?

the tip will be:

$$18\% \times 50$$

$$0.18 \times 50 = \$9$$

the total will be the cost of dinner PLUS the tip:

$$50 + 9 = \text{\$59}$$

- 2** If a child is 120 cm tall, but they grow 4 percent bigger in a year, how tall will they be?

the amount they grow will be:

$$4\% \times 120$$

$$0.04 \times 120 = 4.8 \text{ cm}$$

their new height will be:

$$120 + 4.8 = \text{124.8 cm}$$

- 3** A company uses 6,000 gallons of water each month. If they *reduce* their monthly water use by 12%, how much water will be saved each month?

$$12\% \times 6,000$$

$$0.12 \times 6,000 = \text{720 gal}$$

saved each month!

- 4** A new and improved snack has 22% fewer calories than it had before? If the old version had 200 calories, how many calories does the new snack have?

$$22\% \times 200$$

$$0.22 \times 200 = 44 \text{ calories}$$

so the new total is:

$$200 - 44 = \text{156 cal}$$

- 5** Your friend wants to buy a pair of jeans that are on sale for 30% off. If the jeans' original price is \$40, how much will the sale price be?

the sale discount will be:

$$30\% \times 40$$

$$0.30 \times 40 = \$12$$

so the sale price will be:

$$40 - 12 = \text{\$28}$$

- 6** Tom was able to save 35% more this year than he did last year. If he saved \$140 last year, how much did he save this year?

the extra he saved is:

$$35\% \times 140$$

$$0.35 \times 140 = \$49$$

so the total he saved this year is:

$$140 + 49 = \text{\$189}$$