

Find the Percent of a Number

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3.4 Find the Percent of a Number

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[Figure 1]

Juno works at Wild Adventure amusement park, which has an average of 30,000 visits daily. Over 75% of those people ride on the park's biggest roller coaster, The Zeus. How can Juno figure out how many people ride The Zeus?

In this concept, you will learn to find the percent of a number using multiplication.

Percent of a Number

Part of the usefulness of percent is being able to find percentages of a number. In other words, if you are planning a barbecue and the butcher tells you that 30% of the people want chicken you can use this percent to find how many people will be eating chicken. For how many people should you buy chicken?

The key words here are “of a number” this means that you multiply to solve the problem. You can convert the percent to a decimal and multiply or convert it to a fraction and multiply.

Let's suppose that you invited 58 people to the barbecue. If 30% prefer chicken, then you need to know how many people that is.

First, convert 30% to either a decimal or a fraction.

$$30\% = \frac{30}{100} \quad \text{or} \quad 30\% = 0.30$$

$$30\% = \frac{3}{10}$$

Next, use the decimal or the fraction to multiply by the number of people you invited.

$$\frac{3}{10} \times 58 = \frac{174}{10} \quad \text{or} \quad 0.3 \times 58 = 17.4$$

$$\frac{3}{10} \times 58 = 17.4$$

The answer is 17.4.

Therefore about 17 people want chicken at the barbecue.

Examples

Example 1

Earlier, you were given a problem about Juno at Wild Adventure.

You need to find the number of people that go on the roller coaster **per** day. You know that 75% of the people going to the amusement park go on this ride. You also know that there were about 30,000 people at the park on any given day.

First, change the percent to a decimal.

$$75\% = 0.75$$

Next, multiply 30,000 by the decimal.

$$0.75 \times 30000 = 22500$$

The answer is 22500.

Therefore, approximately 22,500 people go on Wild Adventure's biggest roller coaster, The Zeus, each day.

Example 2

A survey states that 15% of the people surveyed like olives. Out of the 500 people surveyed, about how many like olives?

First, write a statement describing the problem.

$$15\% \text{ of } 500$$

Next, change the percent to a decimal.

$$15\% = 0.15$$

Then, multiply the number of people by the decimal.

$$0.15 \times 500 = 75$$

The answer is 75.

Therefore 75 of the 500 people like olives.

Example 3

What is 20% of 18?

First, change the percent to a decimal.

$$20\% = 0.20$$

Next, multiply 18 by the decimal.

$$0.20 \times 18 = 3.6$$

The answer is 3.6.

Example 4

What is 25% of 40?

First, change the percent to a decimal.

$$25\% = 0.25$$

Next, multiply 40 by the decimal.

$$0.25 \times 40 = 10$$

The answer is 10.

Example 5

What is 5% of 80?

First, change the percent to a decimal.

$$5\% = 0.05$$

Next, multiply 80 by the decimal.

$$0.05 \times 80 = 4$$

The answer is 4.

Review

Find the percent of the given number by converting the percent to a decimal. You may round if necessary.

1. 30% of 90
2. 3% of 12
3. 14% of 900
4. 33% of 99
5. 18% of 100
6. 8% of 72

7. 11% of 50
8. 14.5% of 30
9. 12% of 80
10. 2% of 800
11. 150% of 21
12. 45% of 60

Read the following situations carefully and answer the questions accordingly.

13. For every paycheck you receive, your employer pays 6% to social security. Write this percent as a ratio with a denominator of 100.
14. What is 30% of 500?
15. A store did a survey and found that $\frac{4}{5}$ of its customers have shopped at its competitors' stores within in the previous month. What percent is that?

Review (Answers)

To see the review answers, return to the [Table of Contents](#) and select 'Other Versions' or 'Resources'.

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