math Antics Worksheets

Name:

Date:

Percent Word Problems: What Number is Missing?

P-WP 1

Instructions: For each of these word problems involving percents, figure out which number is missing. Is it the Part, the Total or the Percent? Circle the missing number on the equation below the problem. You do NOT need to actually solve these word problems.

1 A coconut tree has 12 coconuts on it? If 25% of the coconuts fell to the ground, how many fell?

$$\frac{\text{Part}}{\text{Total}} = \frac{\text{Percent}}{100}$$

2 A rain barrel can hold 50 gallons of water. If there are 32 gallons inside of it, what percent of the barrel is full?

$$\frac{\text{Part}}{\text{Total}} = \frac{\text{Percent}}{100}$$

3 A worker has installed 65% of the tiles for a tile floor. It they installed 120 tiles so far, how many tiles are there total?

$$\frac{\text{Part}}{\text{Total}} = \frac{\text{Percent}}{100}$$

4 One week, seventy-two percent of the animals that came to a veterinary hospital were dogs. If there were 230 animals total, how many were dogs?

$$\frac{\text{Part}}{\text{Total}} = \frac{\text{Percent}}{100}$$

5 What percent of your friends like playing dodge ball if 5 out of 8 of them like playing dodge ball?

$$\frac{\text{Part}}{\text{Total}} = \frac{\text{Percent}}{100}$$

6 John has walked 15% of the way home from school. If he has walked 200 meters so far, how far does he walk home from school?

$$\frac{\text{Part}}{\text{Total}} = \frac{\text{Percent}}{100}$$

7 Each day, a bakery makes 50 loaves of wheat bread. If that amount is 20% of all the bread that they bake, how many loaves do they bake each day?

$$\frac{\text{Part}}{\text{Total}} = \frac{\text{Percent}}{100}$$

8 There are 82 students in a high school band. If 31 of those students play brass instruments, what percent play brass?

$$\frac{\text{Part}}{\text{Total}} = \frac{\text{Percent}}{100}$$

9 An Olympic team won 20 medals. If 30% of the medals were gold, how many gold medals did they win?

$$\frac{\text{Part}}{\text{Total}} = \frac{\text{Percent}}{100}$$

10 How many pizzas does a restaurant make each night if 25% of the total is equal to 90 pizzas?

$$\frac{\text{Part}}{\text{Total}} = \frac{\text{Percent}}{100}$$

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What Percent Is It? - Equivalent Fraction Method

P-WP 2

Instructions: Find the percent by converting to an equivalent fraction that has 100 as the bottom number, just like you learned in the video.

1 4 out of 25 is what percent?

$$\frac{4}{25} \times \frac{4}{4} = \frac{16}{100} = 16\%$$

2 10 out of 50 is what percent?

$$\frac{10}{50} \times \frac{2}{2} = \frac{20}{100} = 20\%$$

3 What percent is 11 out of 20?

$$\frac{11}{20} \times \frac{5}{5} = \frac{55}{100} = 55\%$$

4 What percent is 30 out of 200?

$$\frac{30}{200} \div \frac{2}{2} = \frac{15}{100} = 15\%$$

5 3 out of 5 is what percent?

$$\frac{3}{5} \times \frac{20}{20} = \frac{60}{100} = 60\%$$

6 9 out of 10 is what percent?

$$\frac{9}{10} \times \frac{10}{10} = \frac{90}{100} = 90\%$$

7 What percent is 15 out of 500?

$$\frac{15}{500} \div \frac{5}{5} = \frac{3}{100} = 3\%$$

8 What percent is 7 out of 5?

$$\frac{7}{5} \times \frac{20}{20} = \frac{140}{100} = 140\%$$

9 2.5 out of 10 is what percent?

$$\frac{2.5}{10} \times \frac{10}{10} = \frac{25}{100} = 25\%$$

Yep, it works the same way for decimal numbers.

10 1.5 out of 25 is what percent?

$$\frac{1.5}{25} \times \frac{4}{4} = \frac{6}{100} = 6\%$$

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What Percent Is It? - Division Method

Instructions: The formula for finding a percent by the division method is shown below. First, divide the top number by the bottom number to get the decimal value of the fraction. Then, just move the decimal point two places to the right (which is exactly the same as multiplying by 100). You can use a calculator to do the division if you need to. Some percents will still have decimal digits (like 12.5%)

Example 6 out of 8 is what percent?

divide → $\frac{6}{8} = 0.75$

$0.75 \times 100 = 75\%$

then multiply by 100 (or move the decimal point)

Formula:

$$\frac{\text{Part}}{\text{Total}} \times 100 = \text{Percent}$$

1 6 out of 30 is what percent?

$\frac{6}{30} = 0.2$

$0.2 \times 100 = 20\%$

2 What percent is 8 out of 32?

$\frac{8}{32} = 0.25$

$0.25 \times 100 = 25\%$

3 9 out of 25 is what percent?

$\frac{9}{25} = 0.36$

$0.36 \times 100 = 36\%$

4 45 out of 60 is what percent?

$\frac{45}{60} = 0.75$

$0.75 \times 100 = 75\%$

5 What percent is 3 out of 8?

$\frac{3}{8} = 0.375$

$0.375 \times 100 = 37.5\%$

6 What percent is 7 out of 8?

$\frac{7}{8} = 0.875$

$0.875 \times 100 = 87.5\%$

7 5 out of 15 is what percent?

$\frac{5}{15} = 0.33\overline{3}$

$0.33\overline{3} \times 100 = 33.3\%$

rounded off

8 5 out of 16 is what percent?

$\frac{5}{16} = 0.3125$

$0.3125 \times 100 = 31.3\%$

rounded off

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What Percent Is It? Word Problems - Set 1

P-WP 4

Instructions: Solve for the missing percent in each word problem below. Be sure to show your work. (note: This set of problems all work well with the 'equivalent fraction method' but you can use the division method if you want to.)

1 The school band has a goal of raising $800 for some new uniforms. If they have raised $512 so far, what percent of their goal have they raised?

$$\frac{512 \div 8}{800 \div 8} = \frac{64}{100} = 64\%$$

2 In a survey of 300 people, 180 said they preferred vanilla ice cream to chocolate. What percent preferred vanilla?

$$\frac{180 \div 3}{300 \div 3} = \frac{60}{100} = 60\%$$

3 A group of 50 students at a day camp got to choose an activity to do. 21 chose to make a craft, 16 chose to play volleyball and 13 chose to go on a nature walk. What percent chose to make a craft?

$$\frac{21 \times 2}{50 \times 2} = \frac{42}{100} = 42\%$$

4 A flower shop made 200 bouquets to sell on Mother's Day. If the shop sold 190 of the bouquets, what percent did they have left over?

The part left over is: 200 - 190 = 10.

$$\frac{10 \div 2}{200 \div 2} = \frac{5}{100} = 5\%$$

left over

Instructions: For problems 5 and 6, use this table that tells how many of each pet a family has.

Family Pets

Dogs:	4
Cats:	3
Hamsters:	2
Goldfish:	1

5 What percent of the family's pets are cats?

The total number of pets is:
4 + 3 + 2 + 1 = 10.

The number of cats is 3

$$\frac{3 \times 10}{10 \times 10} = \frac{30}{100} = 30\%$$

6 What percent of the family's pets are NOT dogs?

The total number of pets is:
4 + 3 + 2 + 1 = 10.

The part that are not dogs is:
10 - 4 = 6.

$$\frac{6 \times 10}{10 \times 10} = \frac{60}{100} = 60\%$$

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What Percent Is It? Word Problems - Set 2

P-WP 5

Instructions: Solve each word problem below. Use the division method for these problems. You can use a calculator to do the division. If the percent has decimal digits, round it off to one decimal place (like 12.5%).

1 If there are 5 gallons of gas in a car's fuel tank, and the tank can hold a total of 18 gallons. What percent of the tank is full?

$\frac{5}{18} = 0.277\overline{7}$

$0.277\overline{7} \times 100 = 27.8\%$ rounded off

2 A salt water fish tank has 24 fish in it. If 3 of those fish are Clown Fish, what percent are Clown Fish?

$\frac{3}{24} = 0.125$

$0.125 \times 100 = 12.5\%$

3 A battery that lasts for 12 hours has been in use for 7 hours. What percent of the battery life has been used up?

$\frac{7}{12} = 0.58\overline{3}$

$0.58\overline{3} \times 100 = 58.3\%$

4 A marathon is a 26 mile run. If a marathon runner has run 19 miles so far, what percent of the marathon has she completed?

$\frac{19}{26} = 0.7308$

$0.7308 \times 100 = 73.1\%$

Instructions: For problems 5 thru 8, use this table that tells how many pies a bakery makes each day.

Pies Made Daily

Apple:	80	Blueberry:	30
Cherry:	50	Banana Cream:	25
Peach:	40	Key Lime:	15

Total Pies Made Daily: 240

5 What percent of the pies are apple?

The total number of pies is 240

$\frac{80}{240} = 0.33\overline{3} = 33.3\%$

6 What percent of the pies are blueberry?

$\frac{30}{240} = 0.125 = 12.5\%$

5 What percent of the pies are key lime?

$\frac{15}{240} = 0.0625 = 6.3\%$

6 What percent of the pies are NOT peach?

The part that are not peach is 240 - 40 = 200

$\frac{200}{240} = 0.83\overline{3} = 83.3\%$