

Grade 6 - Percent as a Rate per 100 - Lesson

Common Core 6.RP.A.3c · maths-pdf.fr/en/

This **percent lesson** for 6th Grade covers percent as a rate per 100 (Common Core 6.RP.A.3c), with a free PDF to print.

A percent is a rate per 100, so 35% means 35 out of every 100 and equals 0.35 or 35/100. To find a percent of a quantity, change the percent to a fraction or decimal and multiply: 25% of 80 is 20. To find the whole, divide the known part by its fraction of the whole and multiply back.

Grade 6 · Common Core State Standards: **6.RP.A.3c**

Key facts in this percent lesson

Key facts

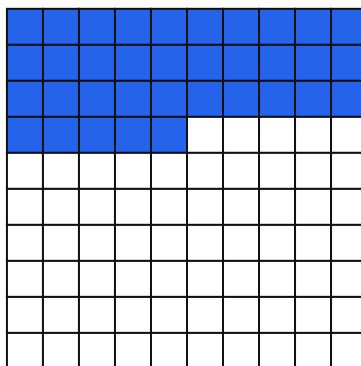
- Percent means per 100: $35\% = 35/100 = 0.35$.
- To find a percent of a number, multiply by the decimal or fraction form.
- 10%, 25%, and 50% are quick benchmarks: one tenth, one quarter, and one half.
- To find the whole, use a tape diagram or divide the part by the percent.
- Discounts are subtracted; tips and tax are added.

What does percent mean?

The word *percent* comes from "per hundred." A percent is a rate per 100. If 35 out of 100 squares are shaded, then 35% of the grid is shaded.

Percent

Percent means "per 100." The percent 35% is the ratio 35:100, the fraction $\frac{35}{100}$, and the decimal 0.35.

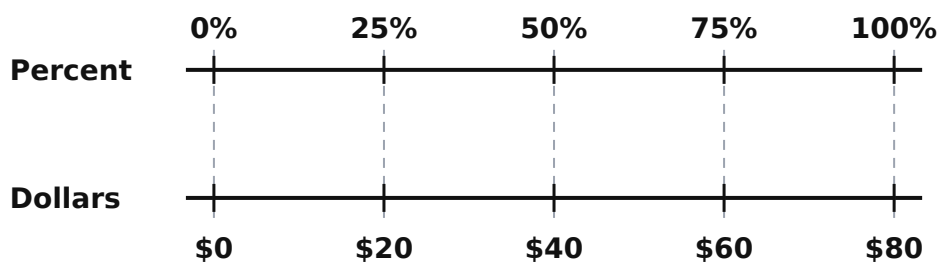


35 out of 100 squares is 35%.

How do you find a percent of a quantity?

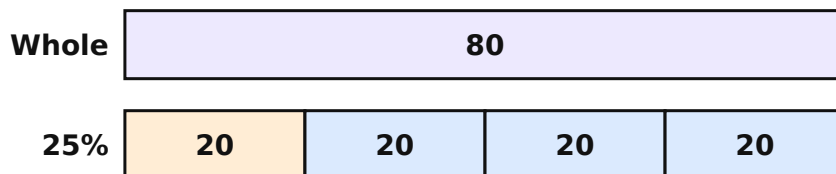
Change the percent to a fraction or decimal and multiply. Easy benchmarks help: 50% is half, 25% is a quarter, and 10% is one tenth.

Percent	Fraction	Decimal
10%	$\frac{1}{10}$	0.1
25%	$\frac{1}{4}$	0.25
50%	$\frac{1}{2}$	0.5
75%	$\frac{3}{4}$	0.75



25% of \$80 is \$20.

Example: Find 25% of 80. $80 \div 4 = 20$, or $0.25 \times 80 = 20$.



A tape diagram for 25% of 80.

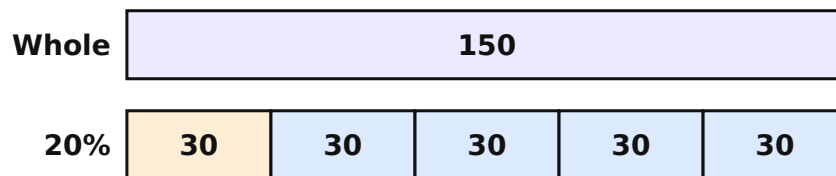
Another way is to use a unit percent. To find 15% of 200, first find 1% of 200, which is $200 \div 100 = 2$. Then multiply by 15: $2 \times 15 = 30$. This works for any percent and any quantity, and

it explains why percent means "per 100." Always check that your answer makes sense: 15% is less than half, so the answer must be less than half of 200.

How do you find the whole when you know the part?

1. Write the percent as a fraction, such as $20\% = \frac{1}{5}$.
2. Draw a tape diagram with the number of equal parts in the denominator.
3. Label the known part and divide to find one part.
4. Multiply by the number of parts to find the whole.

Example: 30 is 20% of a number. Five equal parts make the whole, so $30 \times 5 = 150$.



If 30 is 20% of the whole, five groups of 30 make 150.

Where do you use percents?

Percents show up in sales (20% off), tips (15% of a bill), sales tax (8%), and test scores. A discount is subtracted from the price, while a tip or tax is added. Percents can be greater than 100%: 150% of 40 is $1.5 \times 40 = 60$.

Percent lesson: questions and answers

How do you change a percent to a decimal?

Divide by 100, which moves the decimal point two places left. For example 35% is 0.35 and 8% is 0.08.

How do you find 15% of a number?

Find 10% by dividing by 10, find 5% by halving that, and add. For \$40, 10% is \$4 and 5% is \$2, so 15% is \$6.

How do you find the original price after a discount?

Use the percent that was paid or taken off. If 30% off is \$24, then 10% is \$8, so 100% is \$80.

Can a percent be greater than 100?

Yes. A percent over 100 means more than the whole, such as 150% of 40 which is 60.

How do you find what percent one number is of another?

Write the part over the whole as a fraction, then rewrite it as a fraction out of 100. For 18 of 24, $\frac{18}{24}$ is $\frac{75}{100}$, or 75%.

How to use this percent lesson

Read the definitions first, then follow the worked method line by line and redo the example on paper without looking. When every step makes sense, move on to the worksheet, then check yourself with the quiz.

Download the percent lesson as a PDF with the button below and keep it with your notes.