

Revision & Reminders

Fractions “of” Numbers

Finding a fraction of a number, when the numerator (top number) is 1, is easy! You simply divide by the denominator (bottom number). For example:

$$\frac{1}{4} \text{ of } 16 = 16 \text{ divided by } 4 = 4$$

$$\frac{1}{2} \text{ of } 24 = 24 \text{ divided by } 2 = 12$$

$$\frac{1}{3} \text{ of } 21 = 21 \text{ divided by } 3 = 7$$

It gets slightly trickier when there's a numerator of more than one. But don't worry, you just divide by the bottom (denominator) first, then multiply by the top (numerator) afterwards!

Divide by the bottom, multiply by the top!

For example:

$$\frac{3}{4} \text{ of } 16 = 16 \text{ divided by } 4 (=4), \text{ then multiply } 4 \text{ by } 3 \text{ to get } 12$$

$$\frac{2}{3} \text{ of } 21 = 21 \text{ divided by } 3 (=7), \text{ then multiply } 7 \text{ by } 2 \text{ to get } 14$$

$$\frac{3}{8} \text{ of } 32 = 32 \text{ divided by } 8 (=4), \text{ then multiply } 4 \text{ by } 3 \text{ to get } 12$$

Percentages “of” Numbers

In order to find a percentage of a number, it's best to first convert that percentage into a fraction, so we can find the fraction of the number!

For example, 25% is the same as $\frac{1}{4}$ so we are really finding a quarter, which means dividing the number by 4. 75% is the same as $\frac{3}{4}$ so we are really finding $\frac{3}{4}$ of the number by first dividing by the bottom (4) then multiplying by the top (3).

Look at the examples below:

$$10\% \text{ of } 150 = \frac{1}{10} \text{ of } 150 = 150 \text{ divided by } 10 = 15$$

$$20\% \text{ of } 35 = \frac{1}{5} \text{ of } 35 = 35 \text{ divided by } 5 = 7$$

$$40\% \text{ of } 20 = \frac{2}{5} \text{ of } 20 = 20 \text{ divided by } 5 \text{ (4) then } 4 \text{ multiplied by } 2 = 8$$

Here are some **trickier** examples, which require some extra steps:

15% of 60

You could think of this as finding 5%, then multiplying by 3
5% is the same as $\frac{1}{20}$ so divide 60 by 20, then multiply by 3

$$60 \div 20 = 3 \text{ then } 3 \times 3 = 9$$

This is because $15\% = \frac{15}{100} = \frac{3}{20}$

Divide by the bottom (20) then multiply by the top (3)!

70% of 90

You could think of this as finding 10%, then multiplying by 7

10% is the same as $\frac{1}{10}$ so divide 90 by 10, then multiply by 7

$$90 \div 10 = 9 \text{ then } 9 \times 7 = 63$$