Percentage

If a thing is divided into one hundred equal parts, each part is one per cent.
One per cent is one hundredth share of the whole. The symbol of percentage is %.

Percentage is a unit showing proportion as fraction from a hundred. The word per cent is derived from Latin expression "per centum", which means "from a hundred" and so it is understood even in our everyday life.

In case of percentage exercises, it is always necessary to understand where the percentage is taken from and which is the whole sum of 100%. It is possible to add together only these percentages that are derived from the same whole.

$$1\% = \frac{1}{100} = 0,01$$

$$10\% = \frac{10}{100} = \frac{1}{10} = 0,1$$

$$25\% = \frac{25}{100} = \frac{1}{4} = 0,25$$

$$50\% = \frac{50}{100} = \frac{1}{2} = 0,5$$

$$75\% = \frac{75}{100} = \frac{3}{4} = 0,75$$

$$100\% = \frac{100}{100} = 1$$

Examples

1. Count out 20% from 300
   Solving model: 20% x 300/100 = 60
   Answer: 20% out of 300 equals to 60.

2. 90% of students in woodwork department are 360 boys. What is the students' total number?

Solving model: 90% of the students are men, thus the number to be found out is 100%.   So, x = 360 ÷ 90% x 100% = 400 students.

3. There are 120 boards in warehouse. 40 are birch tree boards. What is other sorts' percentage?

Solving model: 120 – 40 = 80 material of other sorts of wood.
   80 + 120 x 100% = 66.67%

https://www.youtube.com/watch?v=JeVSmq1Nrpw&t=380s

https://www.youtube.com/watch?v=ao89Kz-6Ed8