

Maths Star

Percentage of a Quantity

There are various methods of finding the percentage of a quantity. The method taught most often in schools is as follows:

To find 30% of 25, first of all change both the percentage and the quantity into fractions, then multiply them together:

$$\frac{30}{100} \times \frac{25}{1} \quad \text{we cancel:} \quad \frac{30}{4} \times \frac{1}{1} = \frac{30}{4} = 7 \frac{1}{2}$$

Sometimes, if it is a percentage we know, there are simpler methods. See the "Handy Percentages Reminders" sheet.

Handy ★ Hint:
See the Maths Star 11+ Fractions page for reminders on how to multiply fractions with cancelling and how to change a top heavy fraction to a mixed fraction.

Try it yourself:

$$1) \text{ Find 15\% of 100} = \frac{15}{100} \times \frac{100}{1} = \frac{15}{1} \times \frac{1}{1} = \frac{15}{1} = 15$$

$$2) \text{ Find 20\% of 56} = \frac{20}{100} \times \frac{56}{1} = \frac{1}{5} \times \frac{56}{1} = \frac{56}{5} = 11 \frac{1}{5}$$

$$3) \text{ Find 36\% of 75} = \frac{36}{100} \times \frac{75}{1} = \frac{36}{4} \times \frac{3}{1} = \frac{9}{1} \times \frac{3}{1} = \frac{27}{1} = 27$$

$$4) \text{ Find 70\% of 150} = \frac{70}{100} \times \frac{150}{1} = \frac{7}{10} \times \frac{150}{1} = \frac{7}{1} \times \frac{15}{1} = \frac{105}{1} = 105$$

$$5) \text{ Find 22\% of 45} = \frac{22}{100} \times \frac{45}{1} = \frac{22}{20} \times \frac{9}{1} = \frac{11}{10} \times \frac{9}{1} = \frac{99}{10} = 9 \frac{9}{10}$$

$$6) \text{ Find 7\% of 60} = \frac{7}{100} \times \frac{60}{1} = \frac{7}{10} \times \frac{6}{1} = \frac{42}{10} = \frac{21}{5} = 4 \frac{1}{5}$$