

Percentages

You need to know how to find 50% and 10% without using a calculator:

- To find 50% we divide by 2
- To find 10% we divide by 10

We can use this to find almost any percentage.

Find 45% of £120

$$50\% = \text{£}60$$

$$10\% = \text{£}12$$

$$5\% \text{ (half of } 10\%) = \text{£}6$$

$$45\% = 50\% - 5\%$$

$$\text{£}60 - \text{£}6 = \text{£}54$$

So 45% of £120 is £54

Find 17.5% of £52

$$10\% = \text{£}5.20$$

$$5\% \text{ (half of } 10\%) = \text{£}2.60$$

$$2.5\% \text{ (half of } 5\%) = \text{£}1.30$$

$$17.5\% = 10\% + 5\% + 2.5\%$$

$$\text{£}5.20 + \text{£}2.60 + \text{£}1.30 = \text{£}9.10$$

So 17.5% of £52 is £9.10

A phone which usually costs £320 is in a 15% sale, how much does it cost now?

$$10\% = \text{£}32$$

$$5\% \text{ (half of } 10\%) = \text{£}16$$

$$15\% = 10\% + 5\%$$

$$\text{£}32 + \text{£}16 = \text{£}48$$

$$\text{£}320 - \text{£}48 = \text{£}272$$

The sale price is £272

A TV is sold for £280 plus VAT at 20%, how much does it cost?

$$10\% = \text{£}28$$

$$20\% = 10\% + 10\%$$

$$\text{£}28 + \text{£}28 = \text{£}56$$

$$\text{£}280 + \text{£}56 = \text{£}336$$

The full price is £336