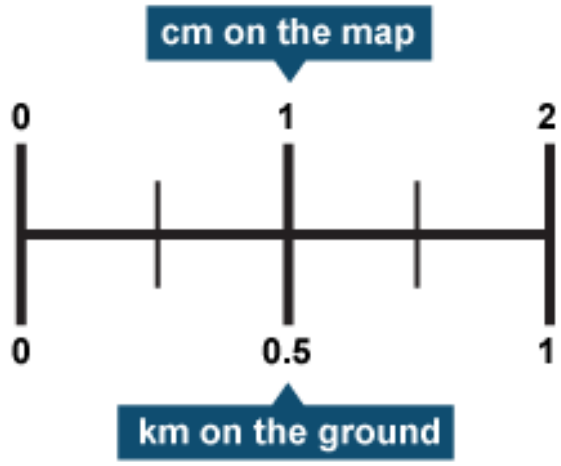
Scale & Distance Worksheet

Recap: What are scale and distance?

Most maps have a scale. These help us to work out distances on maps. This is given by the scale statement (eg 1:25,000) and/or by showing a scale bar.



The scale shows how much bigger the real world is than the map. If the scale is 1:50,000 it means that the map is 50,000 times smaller than the real world. For example, every 1 cm on the map represents 50,000 cm in the real world!

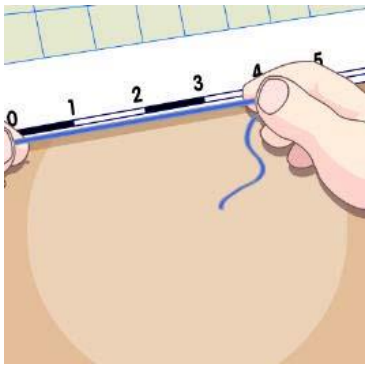
Q1: At a scale of 1:25,000, how far do these distances represent in real life? (Multiply the centimetres by 25,000)

a. 2 cm?
b. 5 cm?

Q2: Look at your Students Atlas. What is the scale of these maps? (Hint: Look at the bottom left hand corner of each page)

a. World Countries (pg 12)?
b. European Countries (pg 16)?

Measuring distance in a straight line



The easiest way to calculate the distance between 2 places is with a straight line. Place a ruler between the 2 places and measure how far apart they are in centimetres. If you do not have a ruler, or it is too short, you can use a piece of paper or string.

Q3: Turn to pg 19 of your atlas, the map of the United Kingdom and Ireland. Can you measure the distance in centimetres between each of these places; then convert it into metres?

a. London and Leicester?
b. Fort William and Middlesborough?

Q4: Can you do the same between these places in Southwest and South Asia (pg 35)?

a. Kathmandu (H3) and Mumbai (G2)?
b. Kabul (F4) and Dhaka (I3)?

Measuring distance along a path/road/river

Another way to measure distance is to see how far you would actually have to travel. You can use a piece of string again, but this time wiggle it along the actual route you would take. This way of measuring will give a larger distance which is more realistic of how far you will actually have to travel to get there.

Q5: Turn to the map of Engladn and Wales on page 22-23.
How far is it from Ipswich (E3) to Birmingham (D3):

a. in a straight line?
b. by railway? (Hint: you have to travel into London first)

Answers:
Q1. a. 50,000 cm (or 500 metres), b. 125,000 cm (or 1250 metres or 1.25 km).
Q2. a. 1 cm: 800 km (or 1: 80,000,000!), b. 1 cm: 250 km (or 1: 25,000,000).
Q3: a. 3cm = 150km, b. 7cm = 350km.
Q4. a. 8cm = 1,600km, b. 12cm = 2,400 km.
Q5. a. 11 cm = 220 km, b. approx. 15 cm = 300 km (anywhere between 13-17cm is fine).