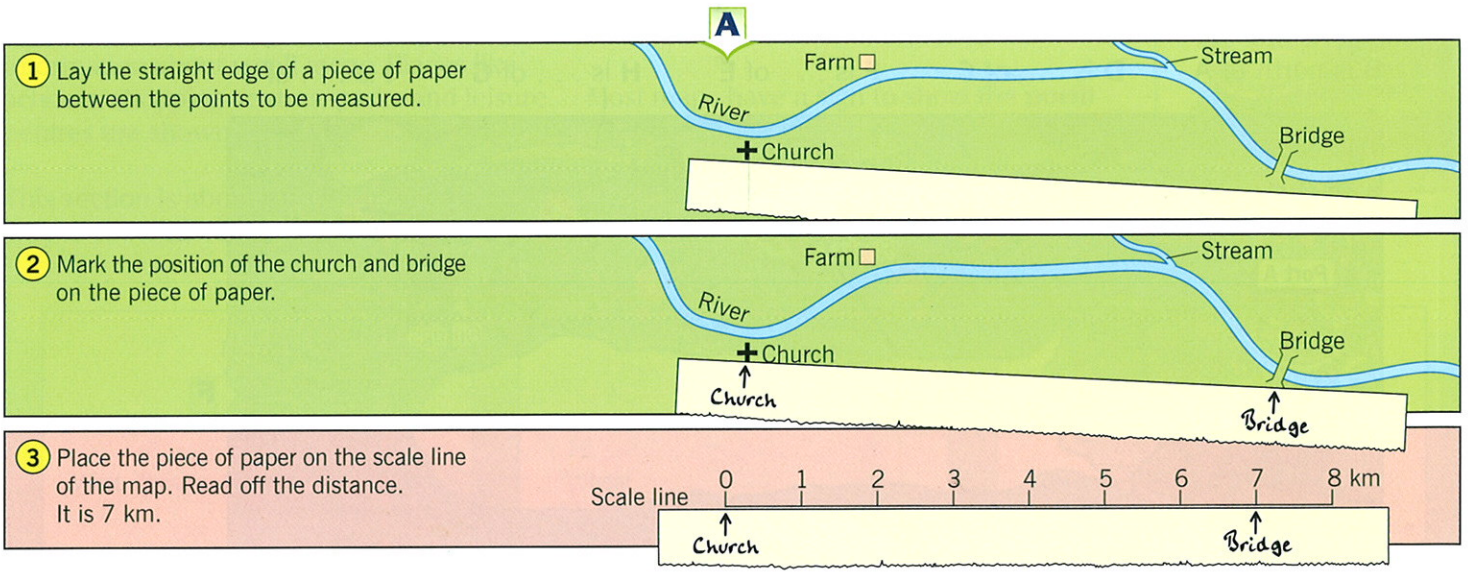


How can we measure distance?

A map can be used to find out how far one place is from another. Maps have to be drawn smaller than real life to fit on a piece of paper. How much smaller they are is shown by the **scale**. This shows you the **real** distance between places. In diagram A the scale

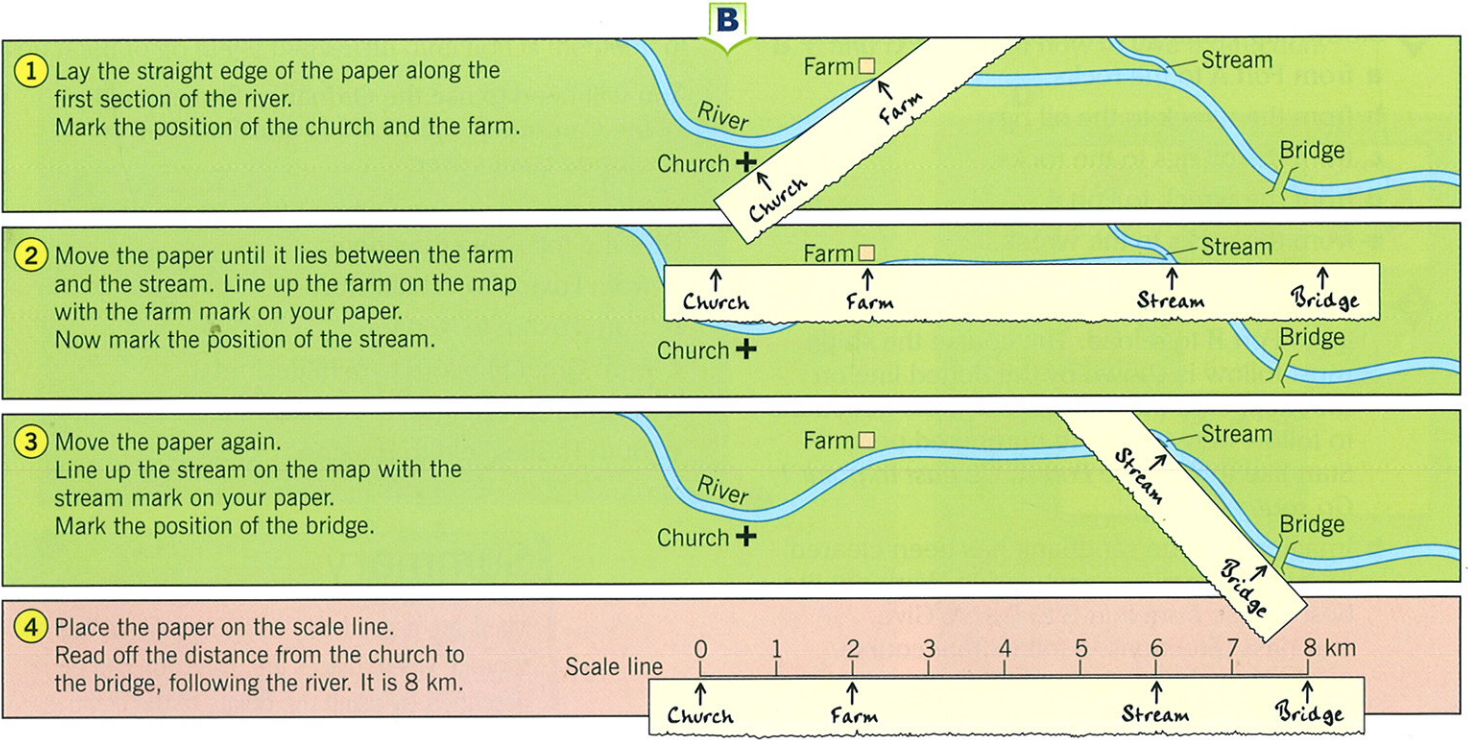
line shows that 1 cm on the map is the same as 1 km on the ground. Every map should have a **scale line**.

Straight line distances are easy to work out. Diagram A shows how to measure the straight line, or shortest, distance between the church and the bridge.



The same method can be used to work out distances that are not straight lines. To measure these, divide the route into a number of sections and measure each one.

This can be done by using a piece of paper and turning it at each bend. Diagram B shows how to measure the distance from the church to the bridge, following the river.



Activities

1 Use the scale line from map C to give the lengths of these lines. Answer like this:
Line a is ... metres (m) in length.

- a _____
- b _____
- c _____
- d _____

2 Use map C and the scale line to give the straight line distance between the places below. Choose your answers from the following:

- 40 m
- 80 m
- 100 m
- 120 m

- a Kate's house and the school
- b Joanne's house and the post office
- c Tim's house and the post office
- d John's house and the garage

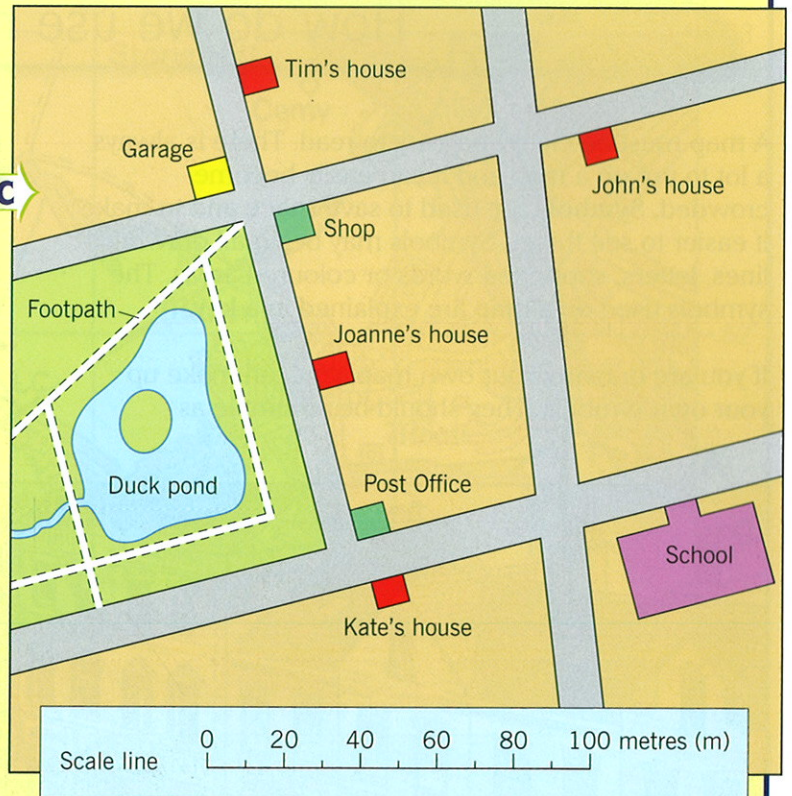
3 a Give the distance Joanne has to travel to school if she calls on Kate on the way.
b Give the distance John has to travel to school if he calls at the shop and post office first.

4 What is the distance around the duck pond if you walk on the footpath? Give your answer in metres (m).

5 You have been given a map and some instructions to help you find some hidden treasure. Follow the instructions to find out where it is.

Check the exact spot by sorting out the jumbled words in the treasure chest and choosing the correct answer.

Leave the wreck and go east for 2 km. Go north for 2 km, west for 1 km, then north-west for another 1 km. Now head north-east for 3 km and east for 2 km. Go south for 4 km and finally west for 1½ km.



Summary
Distances on a map can be measured using the scale line. The scale line gives the real distance between places on the map.