

Distance and Scales

Definition

A scale is a device that tells readers how far real distances are compared to those they can measure on the map.

Why do we need scales?

Maps need to be of a size that makes them convenient to use. Many need to be portable yet have enough detail on them to show readers an accurate of the land and its features.



Ordnance Survey maps of the UK come in a variety of scales.

What does the scale ratio mean?

Two of the most commonly used Ordnance Survey maps are those of 1:25000 and 1:50000 scales. These scale ratios allow us to work out how long certain features or distances are in real life. For example:

1:25000

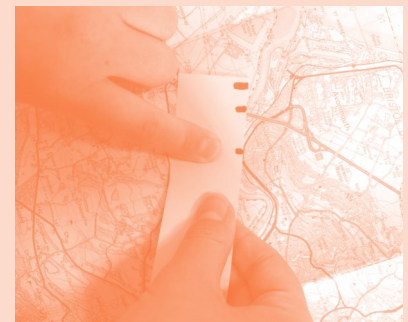
means that every 1cm on the map is equivalent to 25,000cm in real life.

So, if the distance between two roads junctions is 4cm on a 1:25000 map, the distance between the road junctions is 100,000cm (or 1km) in real life.

Other ways to measure the distance of a route on a map:

Using paper

1. Cut a strip of paper and mark a starting point on the edge at one end.
2. Hold the starting point against the start point on the map.
3. Direct the piece of paper along the route and mark any turn in the route on the paper strip, turning the strip at each junction to continue following the path until you reach the end.
4. Mark the end point on the strip too.
5. Hold the strip of paper against the scale bar (usually at the bottom of the map) and read off the distance from it.



Using string

1. Cut a length of string and using a pen, mark a starting point at one end.
2. Hold the starting point against the start point on the map.
3. Wind the string along the route, following the path you intend to take.
4. Mark the end point on the string too.
5. Hold the string against the scale bar (usually at the bottom of the map) and read off the distance from it.



Using online and digital programmes

Many digital mapping programmes (such as Digi Map, Arc GIS or Google Maps) allow you to plot a route by clicking the cursor on the start point and following the route you intend to take to the end. The programme can then automatically work out the distance for you and may even be able to tell you how long it might take to walk it.

