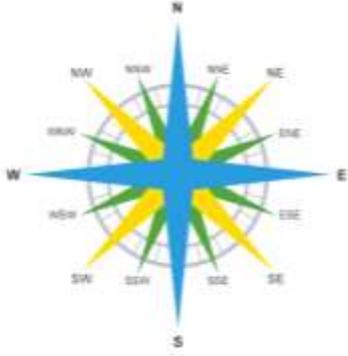


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Compass Points

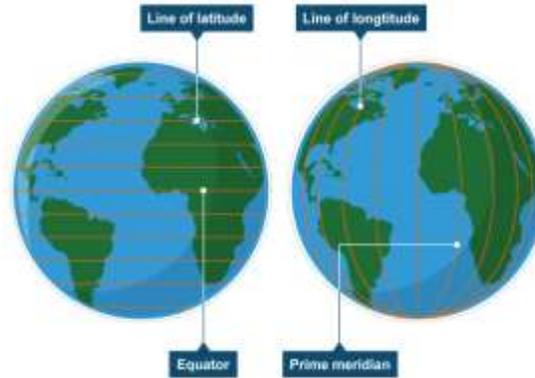
The four main points of the compass are north, east, south and west. Half way between each of these there are four other points: north-east, south-east, south-west and north-west.



Lines of latitude

Lines of latitude circle the Earth in an east-west direction. They are parallel.

Lines of longitude run from the top of the Earth to the bottom. They meet at a point at the north and south poles and are called meridians.



Physical and political maps

There are two types of maps;

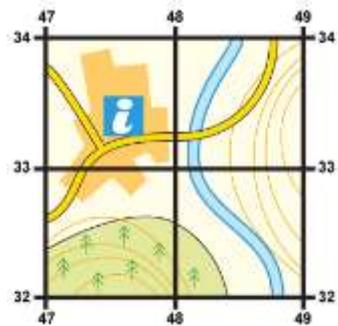
Physical maps - show natural features such as rivers and mountains.

Political maps – show artificial features such as borders and countries.

Four-figure grid references

A grid of squares helps the map-reader to locate a place. The vertical lines are called **eastings**. They are numbered - the numbers increase to the east. The horizontal lines are called **northings** as the numbers increase in a northerly direction.

Things to remember: When you give a grid reference, always give the easting first: *"Along the corridor and up the stairs"*.

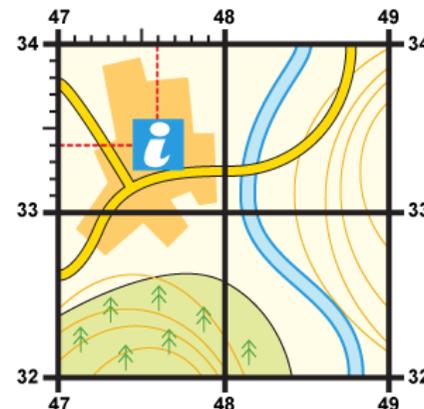


E.g. Tourist information would be 4733

Six-figure grid references

Sometimes it is necessary to be even more accurate. In this case you can imagine that each grid is divided into 100 tiny squares. The distance between one grid line and the next is divided into tenths.

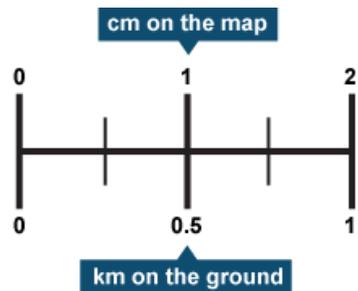
E.g. Tourist information would be 476334



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Scale & distance

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.

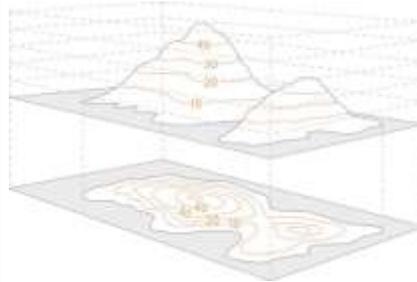


How to show height on a map

Relief – height of the land

Maps show height in a number of different ways:

Spot heights and triangulation pillars – The number is the height above sea level in metres. The blue triangle represents a **triangulation pillar**; the networks of concrete pillars found in the UK that were used to make maps.



Contours - These are lines drawn on maps that join places of the same height. They are usually an orange or brown colour. Some contour lines have their height above or below sea level written on them. It is possible to use them to see the shape of the land - if contour lines are close together the slope is steep, if they are far apart the slope is gentle.

Layer shading - Maps are sometimes shaded to show the height of land

Using GIS

GIS stands for Geographic Information Systems

GIS – A system/tool for displaying & analysing data related to positions on Earth's surface

Emergency services - Can use to locate the closest ambulance to the location of the call. This allows the ambulance crew to find the fastest route to the scene. When traffic is particularly heavy, such as during the morning and evening rush hours, it can take the responding crew longer than usual to arrive at the emergency scene.

Crime - Information can then be collected about what crimes happened in the area, when and where they were committed. All data about each reported crime is stored digitally in the same way nationwide so crimes from all over the country can be compared.

Natural hazards - We can use GIS to prepare for natural disasters such as hurricanes and floods. GIS can closely predict the areas that could be impacted. This means warnings can be issued, people can be evacuated and prepare for a potential disaster.

Tracking animals - We can use GIS to track animals and their movements. This allows us to see how animals' migration patterns have changed over time. We can also use GIS to see the location of animals and track their movements and territory. This is particularly useful with endangered animals such as snow leopards.

Businesses - Building a new cinema complex is expensive, so companies must find a location that will attract the maximum number of businesses. GIS shows where the company's competitors have cinemas, the type of customers living in the areas and nearby transport links.

