



Topographic maps & Cross-sections

Topographic maps

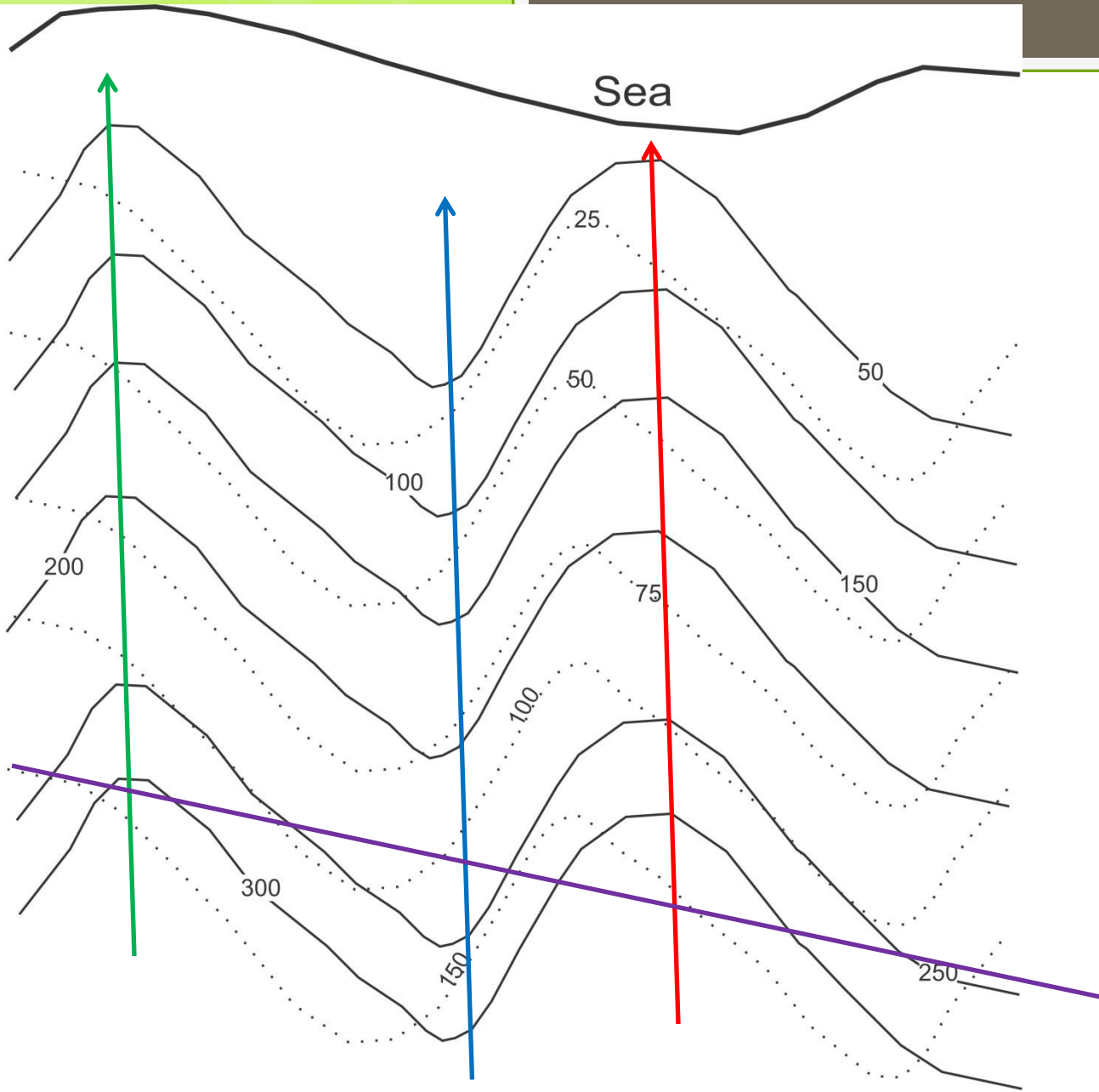
- Maps are a 2-D representation of a 3-D world. They are a 'bird's eye' view – as if the viewer is 'flying' above the land surface and looking down on it

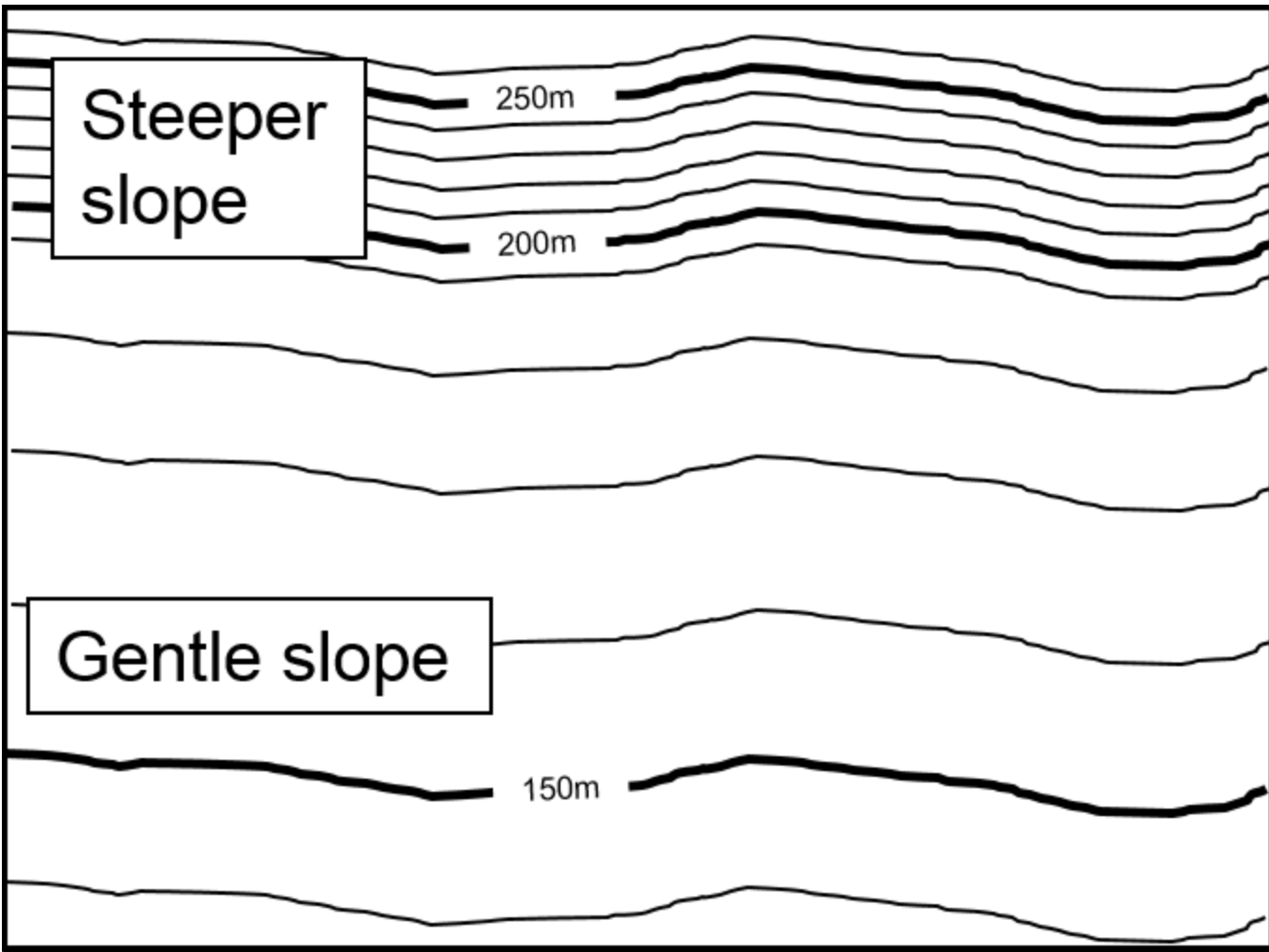
Scales

- Show the distance on the map compared to the distance on the ground
- It is important to choose an appropriate map scale for the task you are undertaking
- Common scales include:
 - 1:30 000 000 (e.g. world map or atlas)
 - 1:1 000 000 (e.g. country map)
 - 1:50 000 (e.g. regional map)
 - 1:10 000 (e.g. local map)
- A map scale of 1:50 000 means:
 - 1mm on the map represents 50 000mm or 50m or 0.05km on the ground

Contours

- Contours are lines joining points of equal value. This value on topographic maps is height (or elevation/altitude) above mean sea level (MSL)
- Each successive contour represents an increase or decrease in constant value. Often every 5th contour will be in bold to help identification





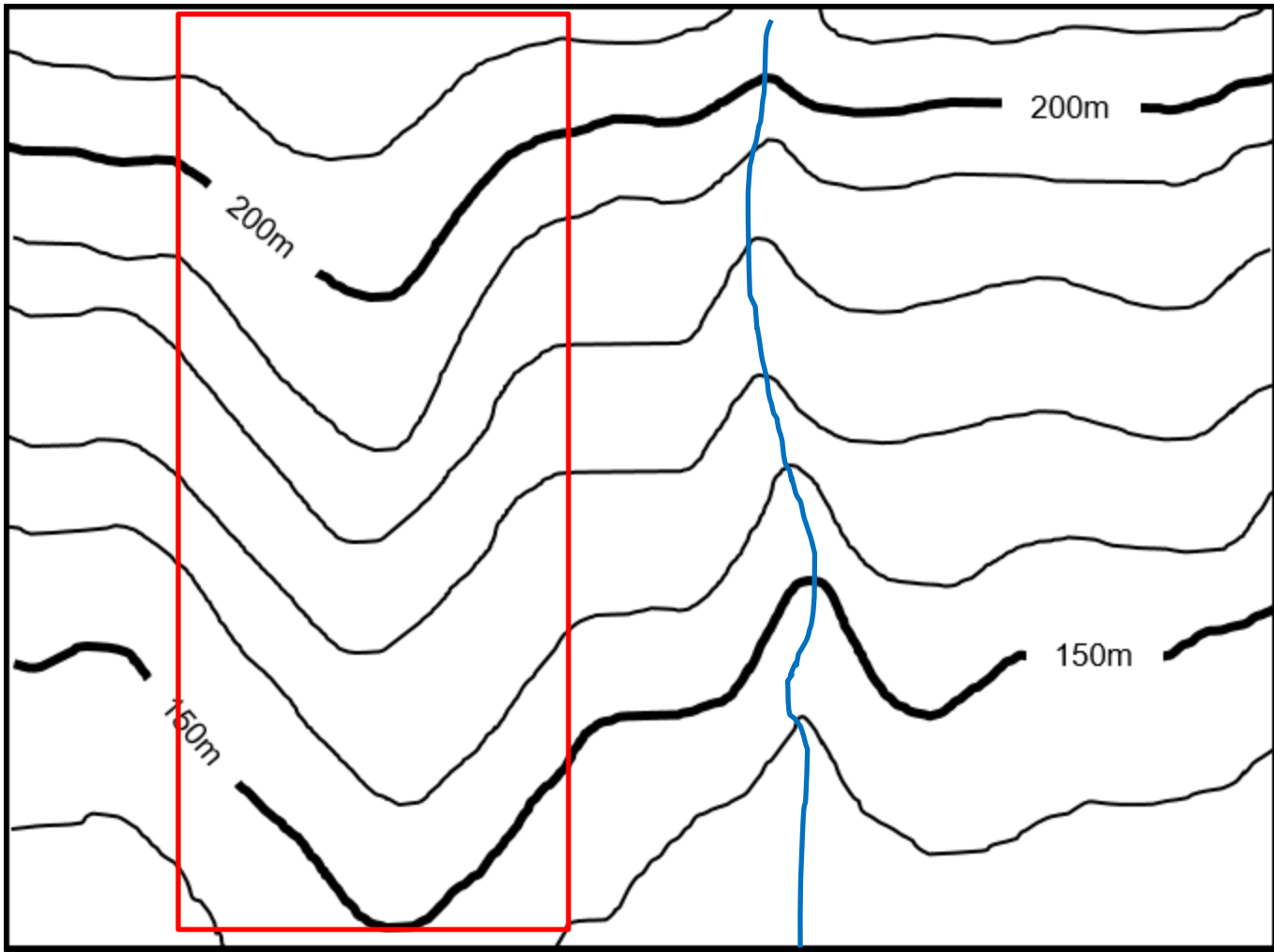
Steeper slope

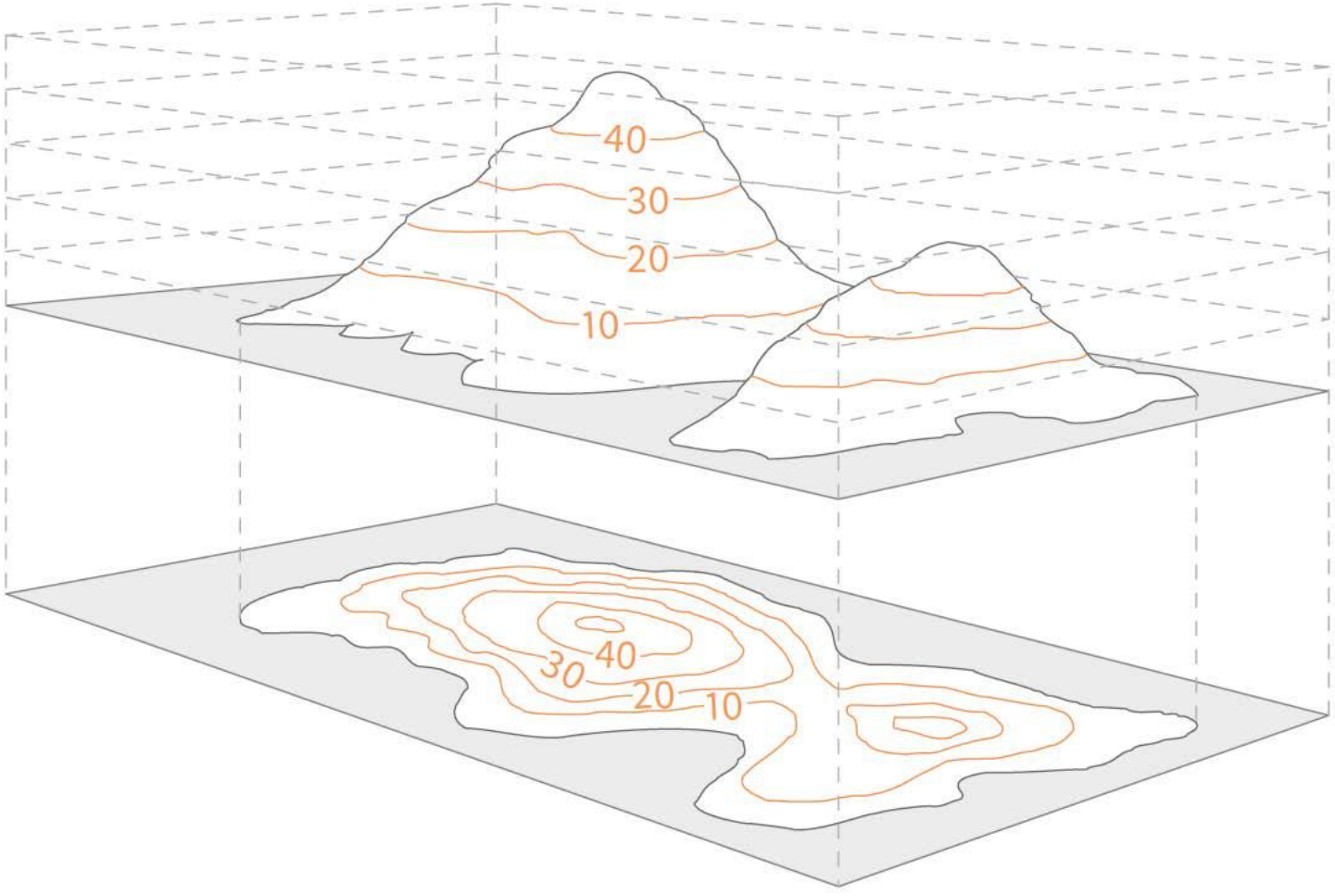
250m

200m

Gentle slope

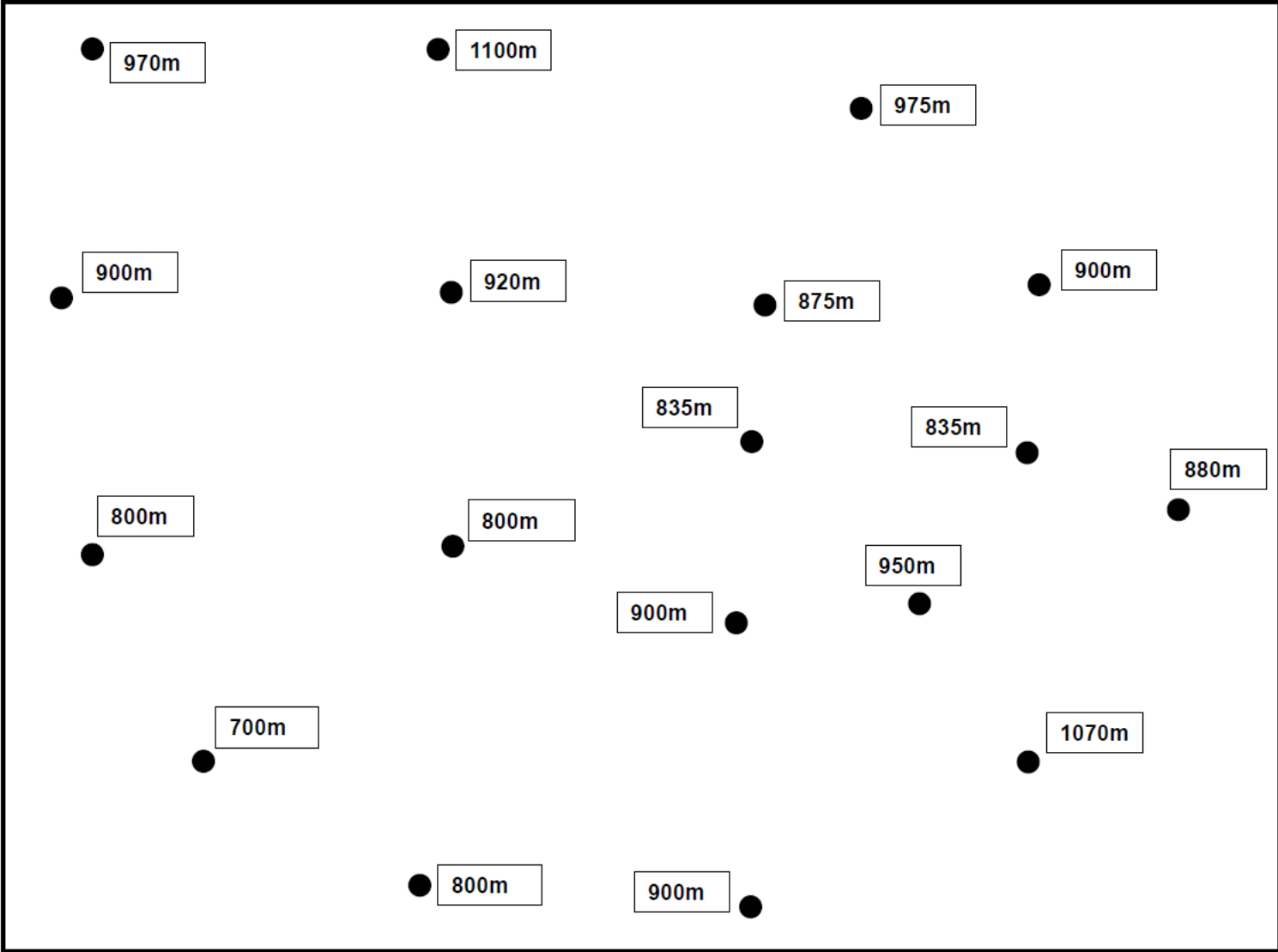
150m





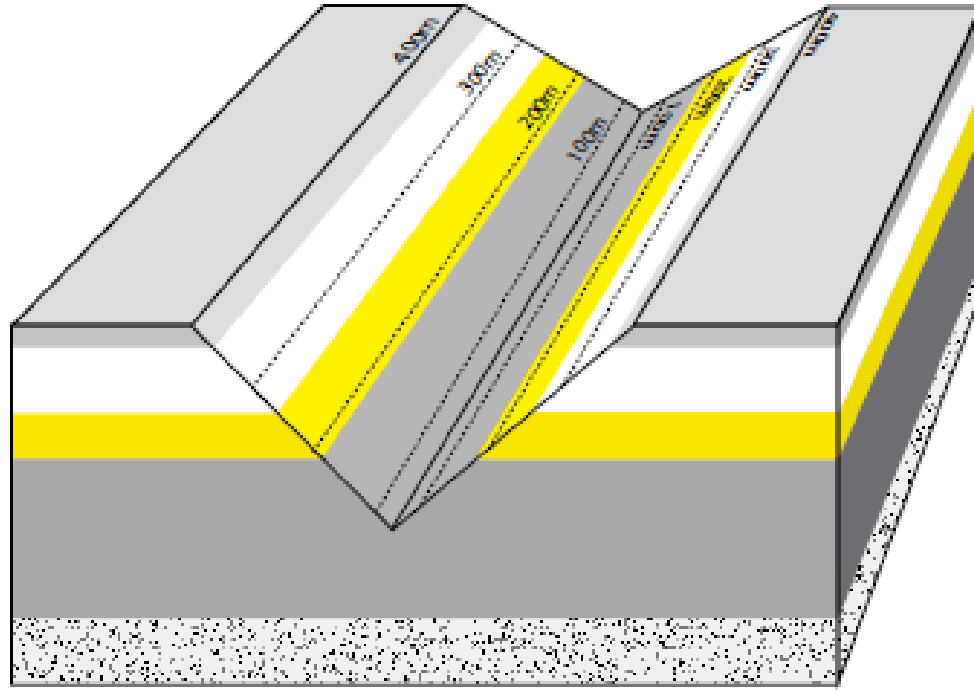
How to contour?

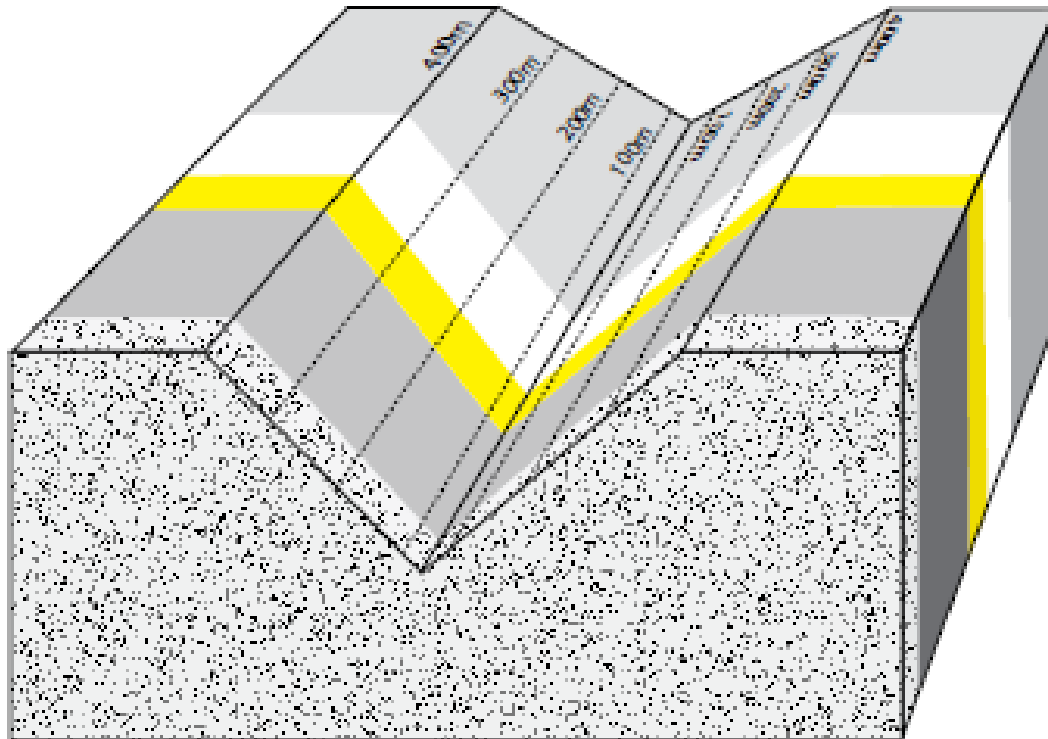
- Every point on a contour line has the same elevation.
- Elevations on one side of the line are higher than elevations on the other side of the line.



Cross - sections

Constructing or sketching cross - sections while mapping an area is an important step in understanding the geology, and may provide critical insights into the developing map.





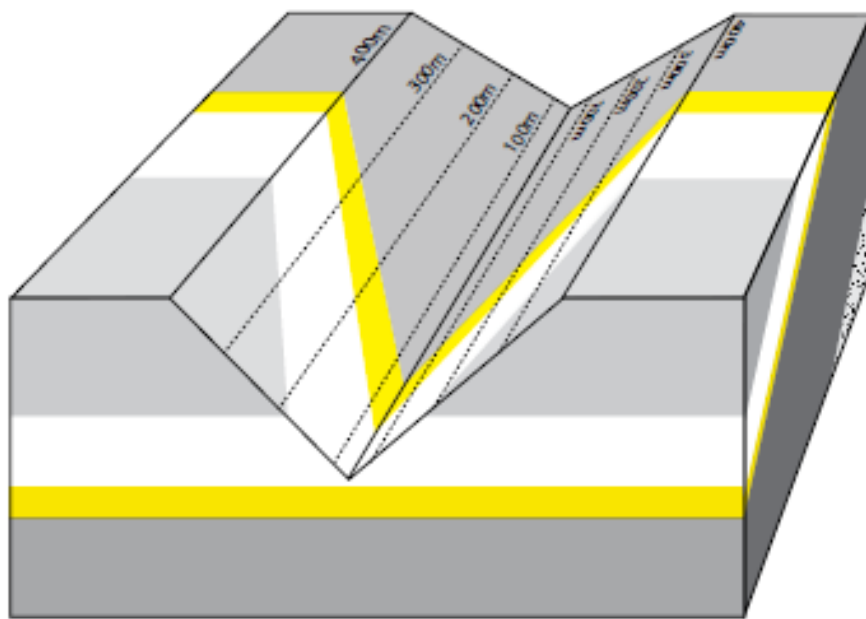
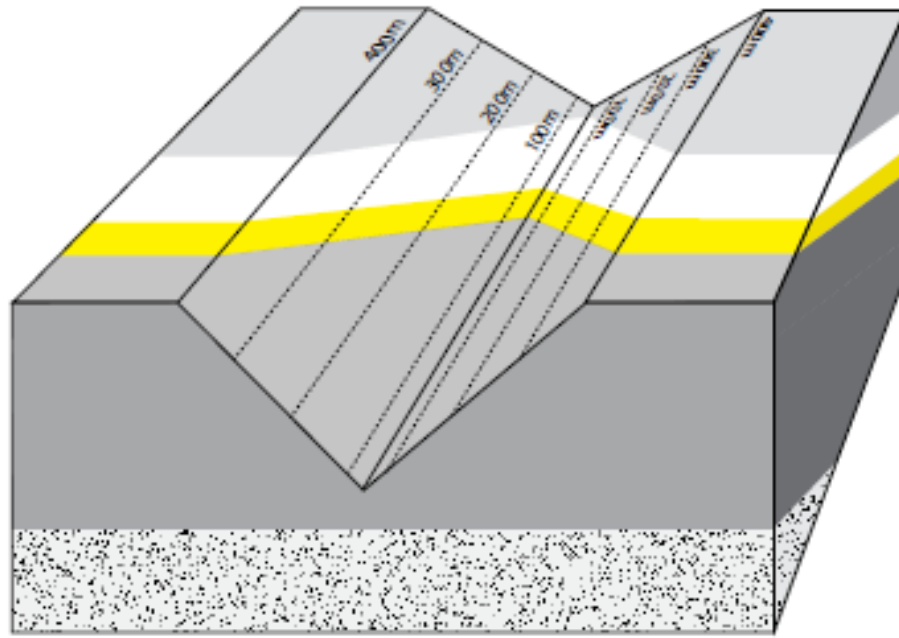
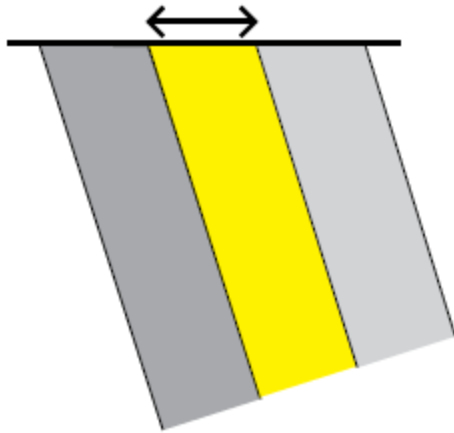
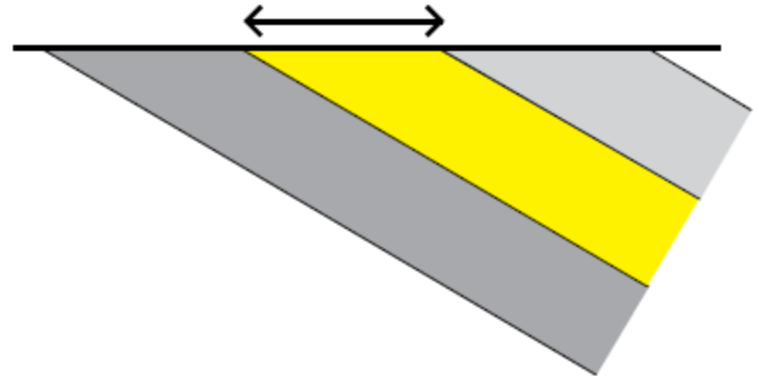


Fig. 8. Block diagram of a fold.

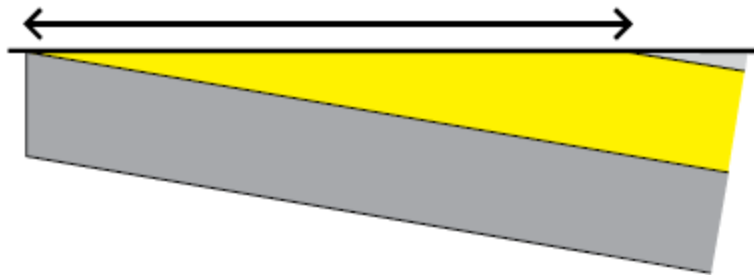




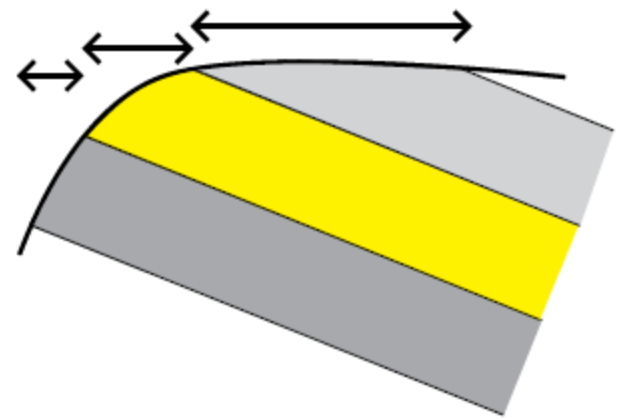
a



b



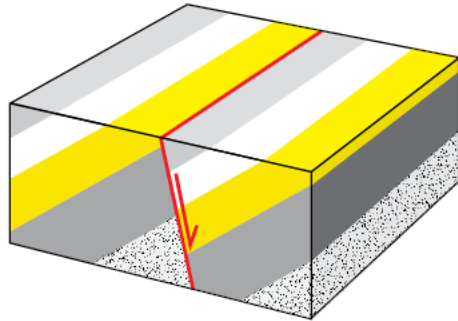
c



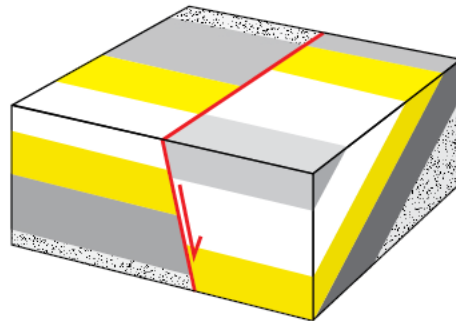
d

Figure 3: Effects of dip of beds and steepness of topography on width of outcrop

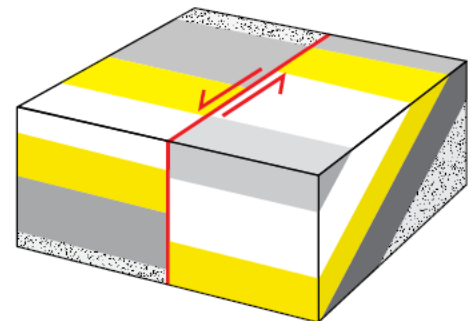
a)



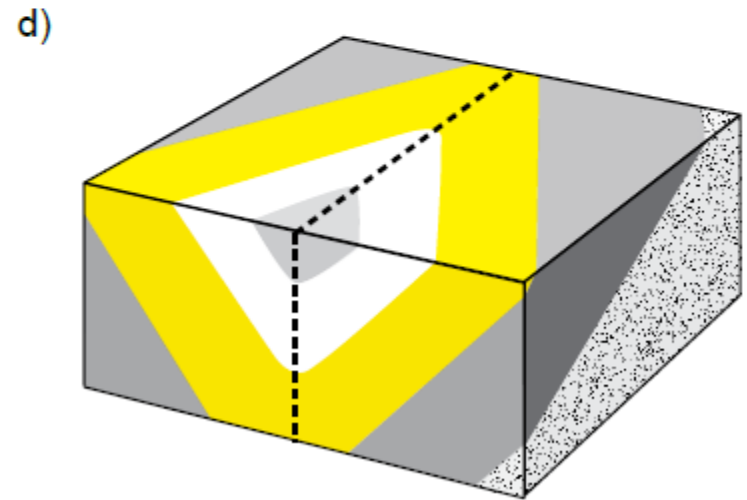
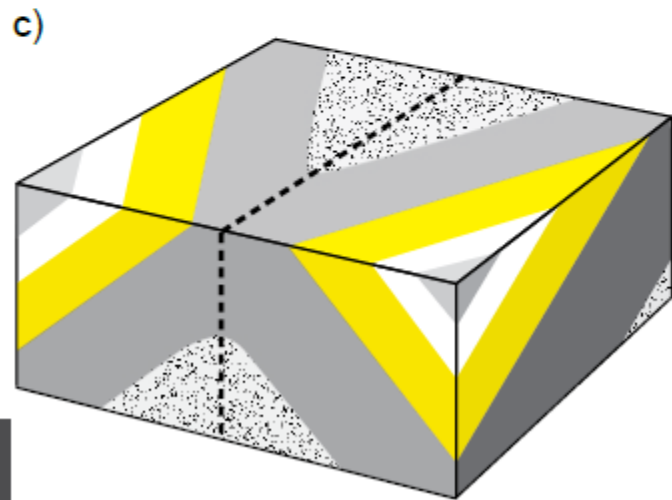
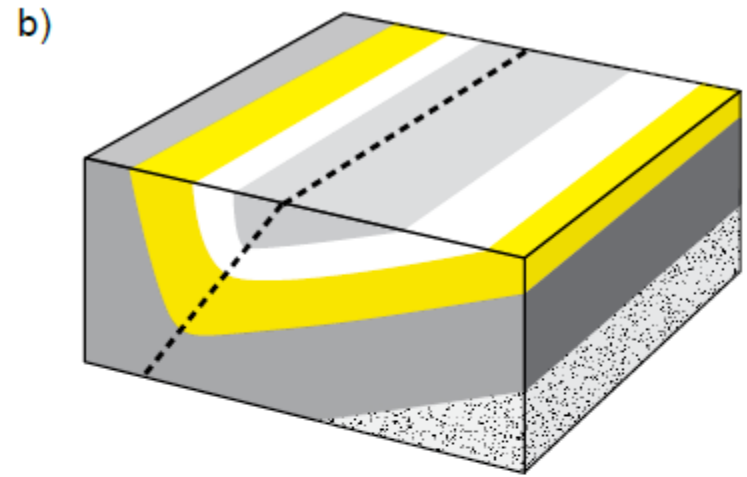
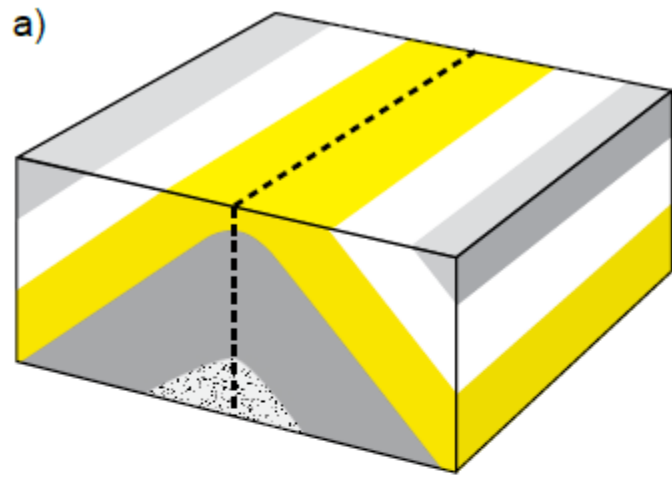
b)



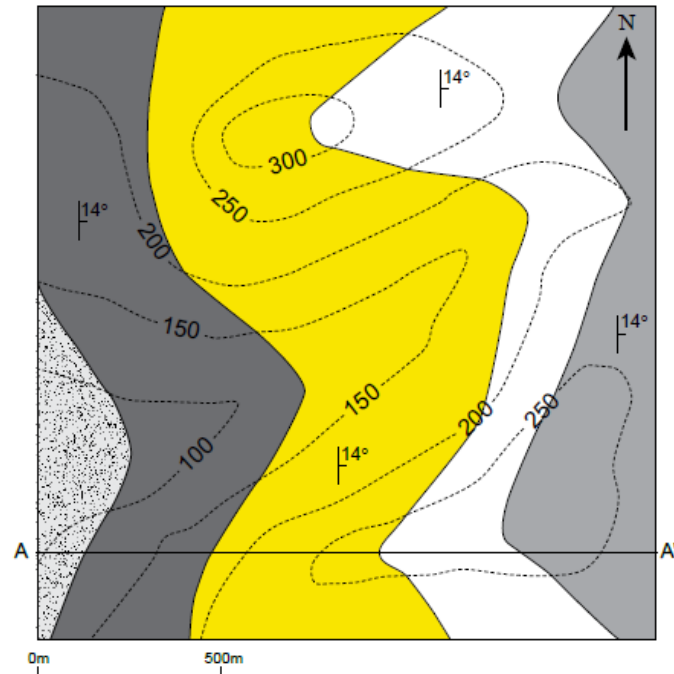
c)



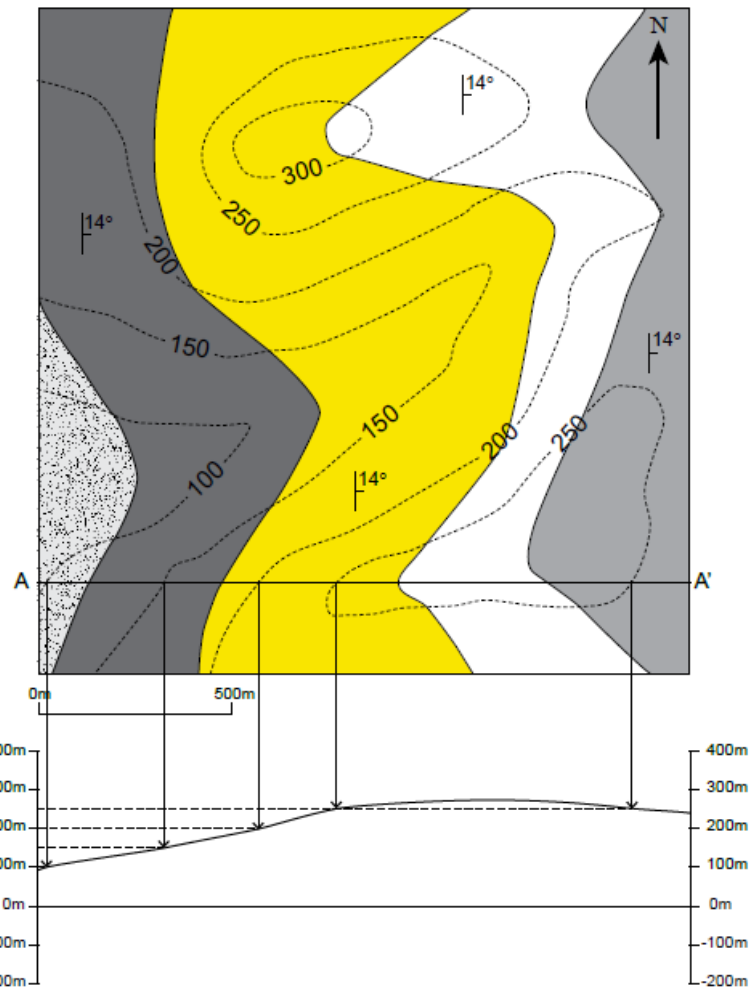
Faults



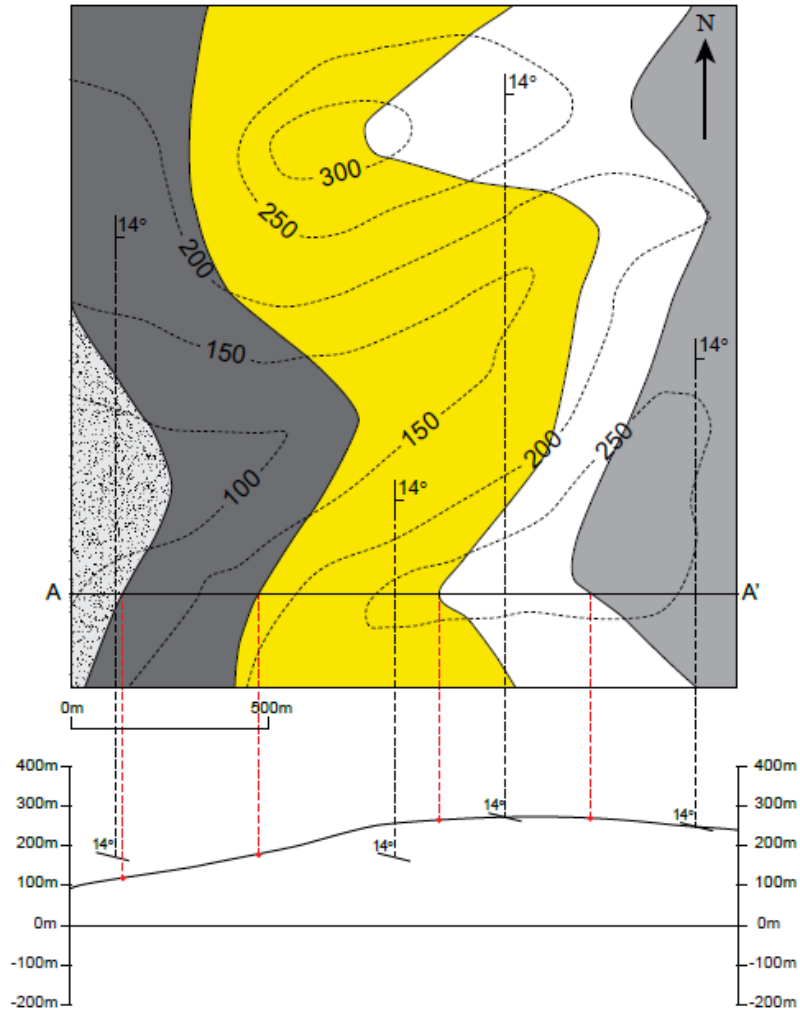
Folds



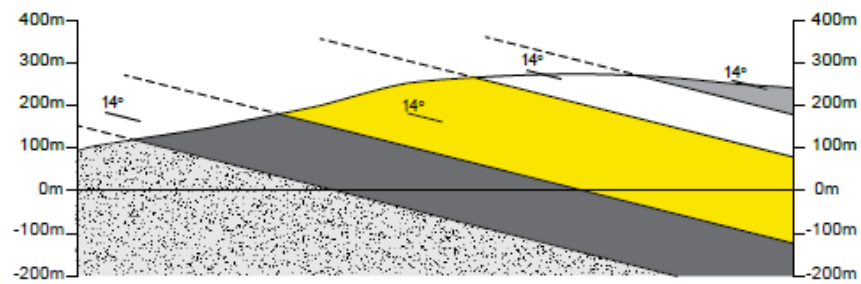
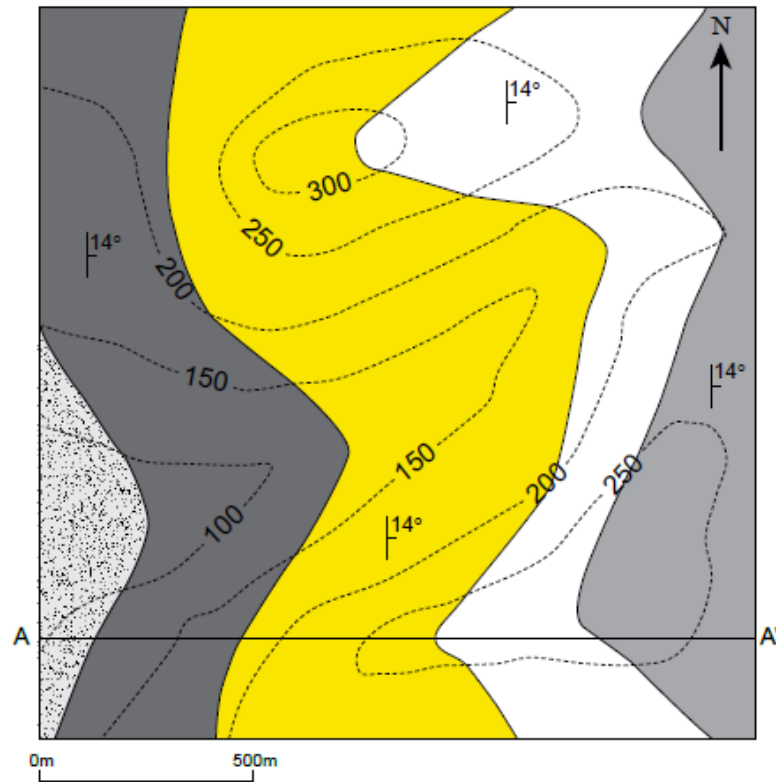
Map 1: How to draw a cross section



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