

What is planimetric map and topographic map?

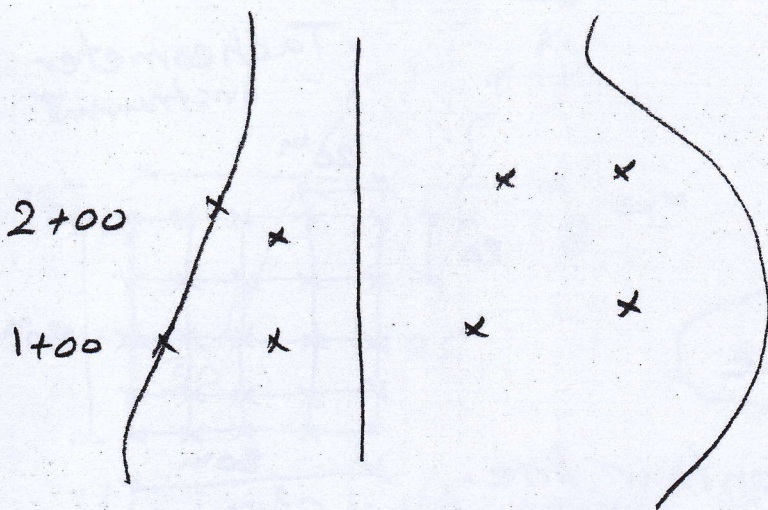
Map of a region that must show relief need not show contours. 7 If we map a plain country and use a contour interval of 100 feet, the contours will be so widely spaced that they will be indistinguishable from a straight line.

Method of contouring

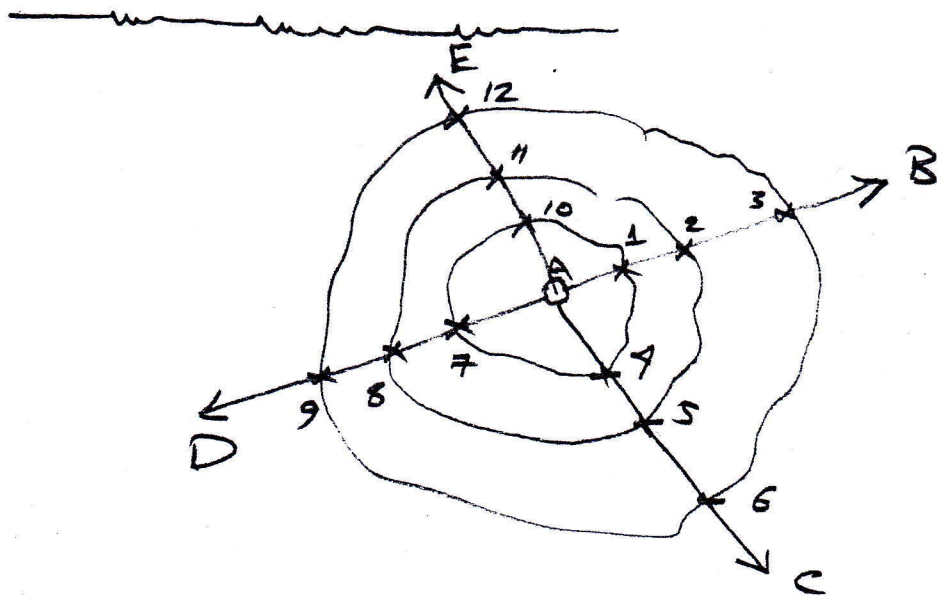
1. Cross-section method
2. Direct location method
3. Control point method.
4. Grid method.

1. Cross-section method

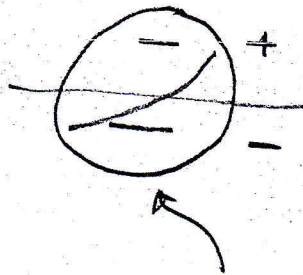
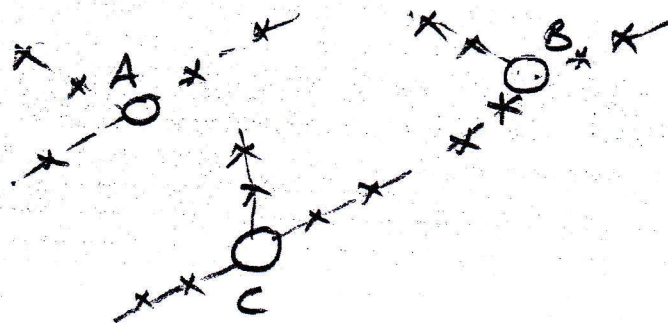
station	L	Φ	R
1+00	$\frac{35.8}{-70}, \frac{36.2}{-35}$	$\frac{36.1}{0}$	$\frac{36.1}{35}, \frac{35.0}{70}$
2+00	$\frac{32.8}{-70}, \frac{32.6}{-35}$	$\frac{35.6}{0}$	$\frac{33.9}{35}, \frac{32.7}{70}$



2. Direct Location method



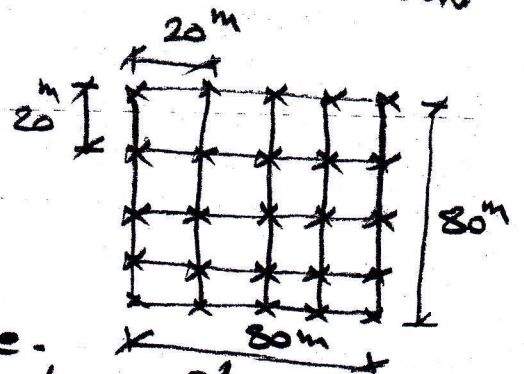
3. Control point method



Tacheometer instrument

4. Grid method

$$k = \frac{S}{\Delta E} * \Delta e$$



- k: Location of contour line.
- S: Distance between two points on plan.
- ΔE : Difference level between two points.
- Δe : Difference level between least elevation and adjacent to contour line.

9

Example/ Elevation of point A is (32m) and the elevation of point B is (24m), distance between them (42mm). Find number of Contour lines between the points and its location while Contour interval = 5m.

Solution

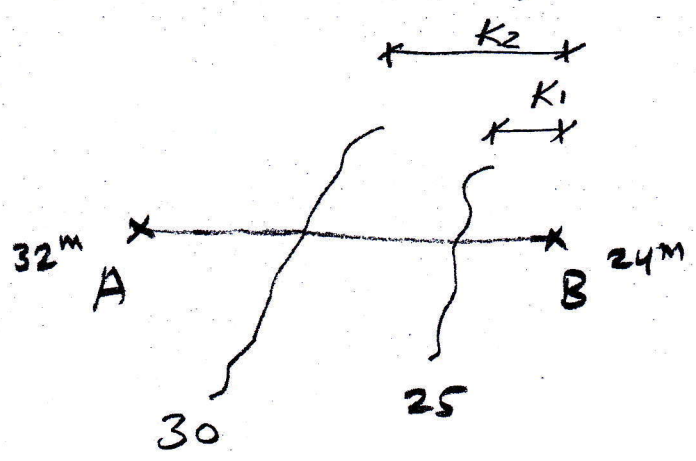
$$\text{number of contour lines} = \frac{\text{Difference between elevations}}{\text{Contour Interval}}$$

$$= \frac{8}{5} = 1.6 \approx 2.0$$

$$K_1 = \frac{S}{\Delta E} * \Delta e \text{ (Location from B)}$$

$$= \frac{42 \text{ mm}}{(32-24) \text{ m}} * (25-24) \text{ m} = 5.25 \text{ mm}$$

$$K_2 = \frac{42 \text{ mm}}{(32-24) \text{ m}} * (30-24) = 31.5 \text{ mm}$$



H.W) Check the result in this example if the location of contour line taken from A?