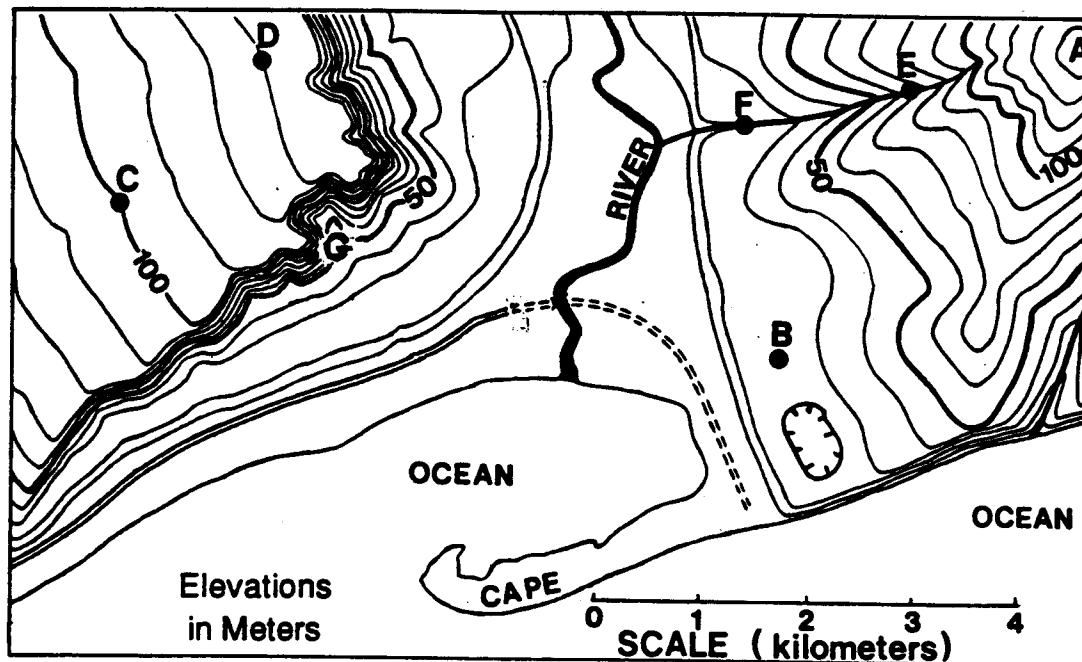


Gradient is a synonym for slope. If a hill has a large gradient, it is a steep hill which changes quickly in elevation. On any isoline map, the places with the steepest gradient will be the places where the isolines are the closest together. On the map below, where is the gradient the steepest? _____



Gradient can be calculated:
$$\text{Gradient} = \frac{\text{Change in Elevation}}{\text{Change in Distance}} \quad \left(Gr = \frac{\Delta \text{Elev}}{\Delta \text{Dist}} \right)$$

For example, the distance from E to F is _____ km

The elevation of E is _____ m and the elevation of F is _____ m. The difference is _____ m.

Therefore,
$$Gr \frac{\Delta \text{Elev}}{\Delta \text{Dist}} = \frac{50 \text{ m}}{1.6 \text{ km}} = 33.3 \text{ m/km}$$

(Please note how the units are carried through.)

Solve the problems below as shown above.

Be sure to start each with the formula for gradient, show your work, and carry through with the proper units.

1. Calculate the gradient from C to D.
Be sure to show your work here! →)
2. Calculate the gradient from A to B.
3. Another word for gradient is _____.
4. What is the contour interval on this map? _____

On any isoline map, the gradient is the steepest where _____