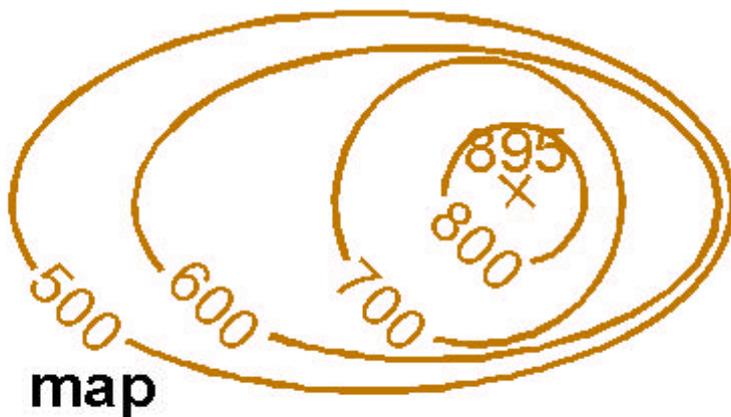
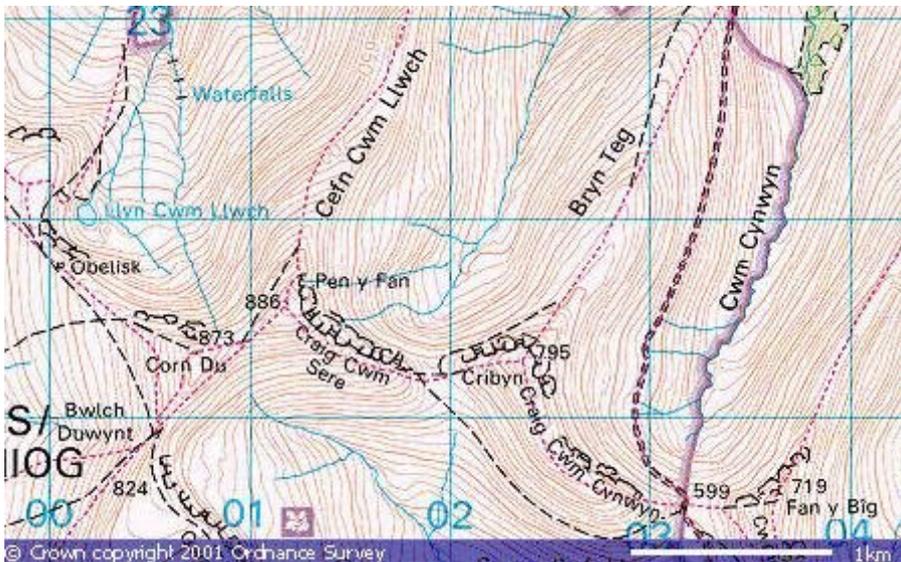


## Map Contours

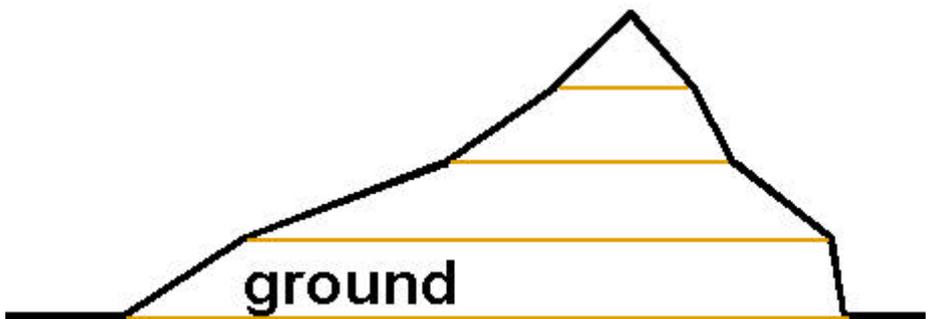
Contour lines show the height above sea level (in m)

The closer the lines the steeper the slope.

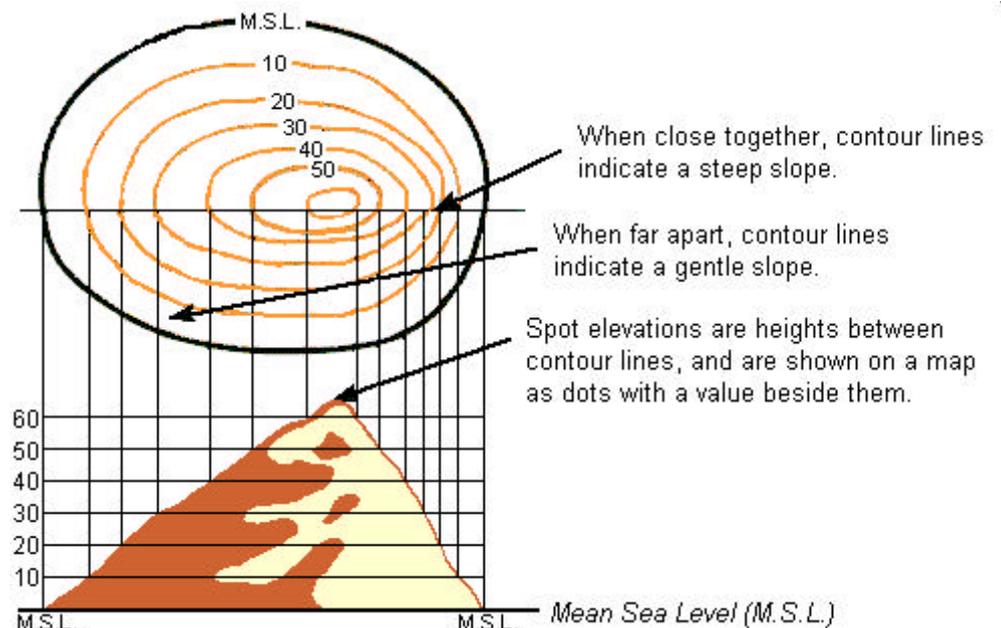


Most maps have contour lines every 10 m.

There are certain features you will have to recognise such as:

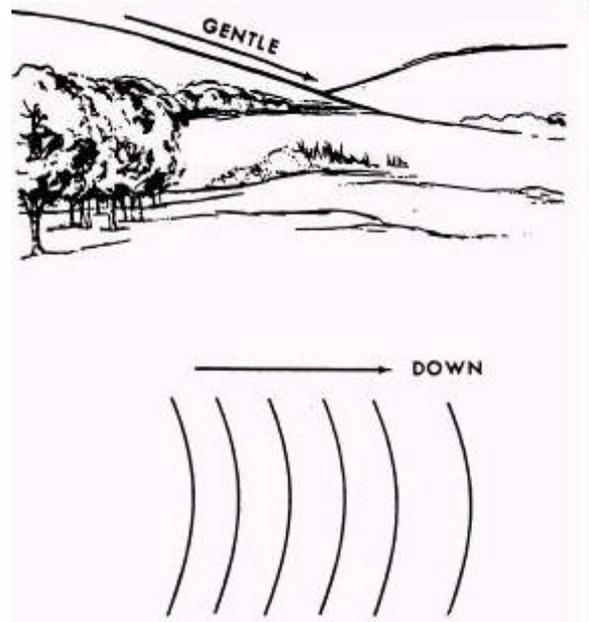


- Hill top
- Valley or re-entrant
- Ridge
- Spur
- Saddle (pass, col)



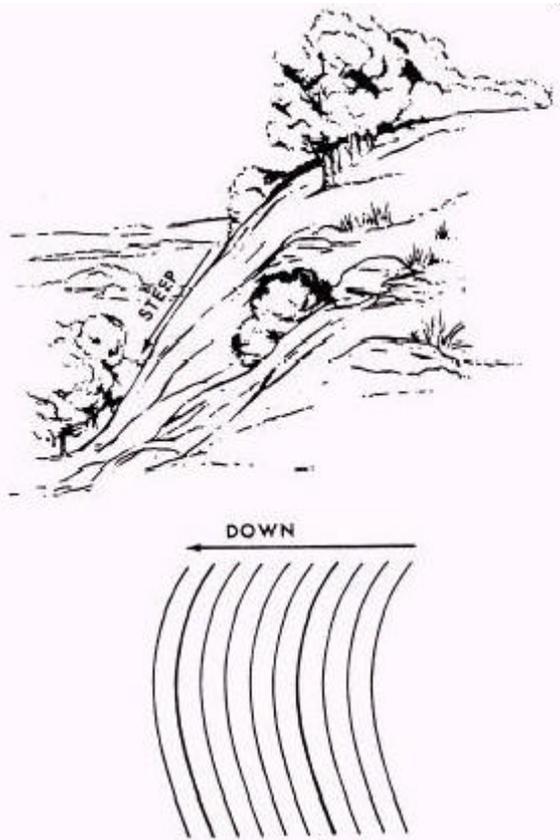
## Uniform, gentle slope.

Contour lines evenly spaced and wide apart indicate a uniform, gentle slope



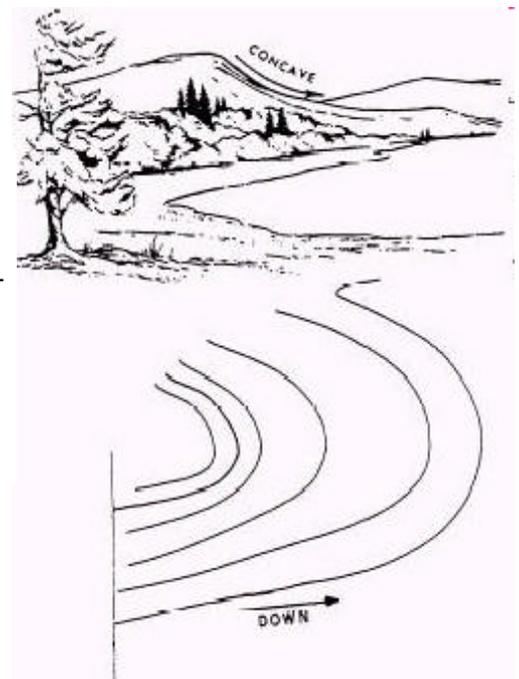
## Uniform, steep slope.

Contour lines evenly spaced and close together indicate a uniform, steep slope. The closer the contour lines are to each other, the steeper the slope



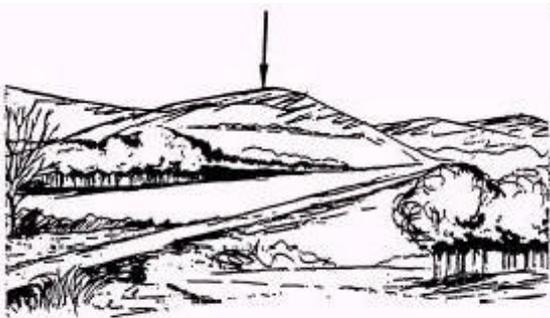
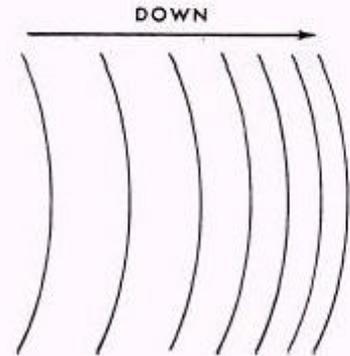
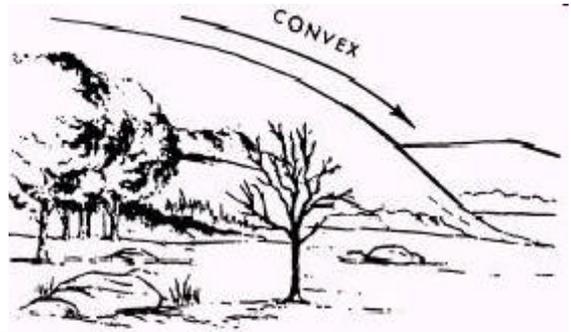
## Concave slope.

Contour lines closely spaced at the top and widely spaced at the bottom indicate a concave slope. Considering relief only, an observer at the top of a concave slope can observe the entire slope and the terrain at the bottom. or concealment from observers or weapons at or near the top; also, farther up the slope, the climb would be more difficult. However, a unit attacking up a concave slope would have no cover



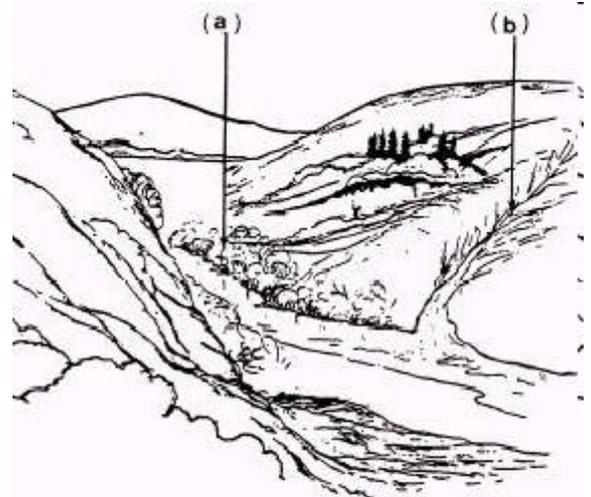
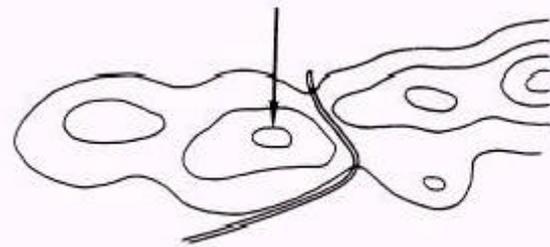
## Convex slope.

Contour lines widely spaced at the top and closely spaced at the bottom indicate a convex slope. An observer at the top of a convex slope would have no observation of most of the slope or of the terrain at the bottom. But a unit attacking up a concave slope would have a much greater degree of cover and concealment than on a concave slope; also, the climb farther up the slope would be easier.



## Hill.

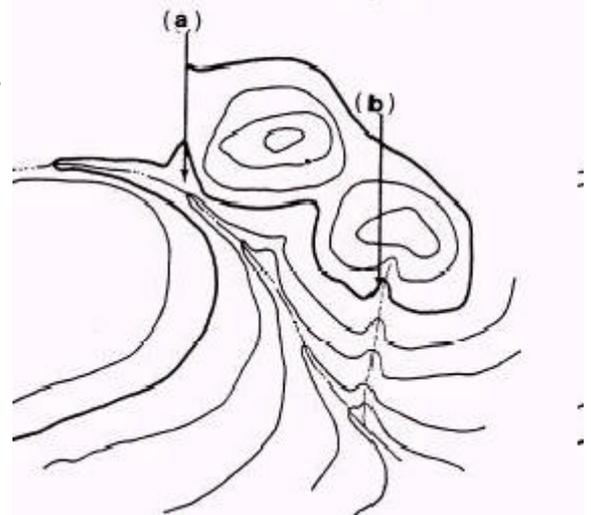
HILL. This is a point or small area of high ground. When you are located on a hilltop, the ground slopes down in all directions.



## (a) Valley; (b) Draw.

VALLEY. A valley is a course of a stream that has at least a limited extent of reasonably level ground bordered on the sides by higher ground. The valley generally has manoeuvring room within its confines. Contours indicating a valley are U-shaped and tend to parallel a major stream before crossing it. The more gradual the fall of a stream, the farther each contour parallels it. The curve of the contour crossing always points upstream.

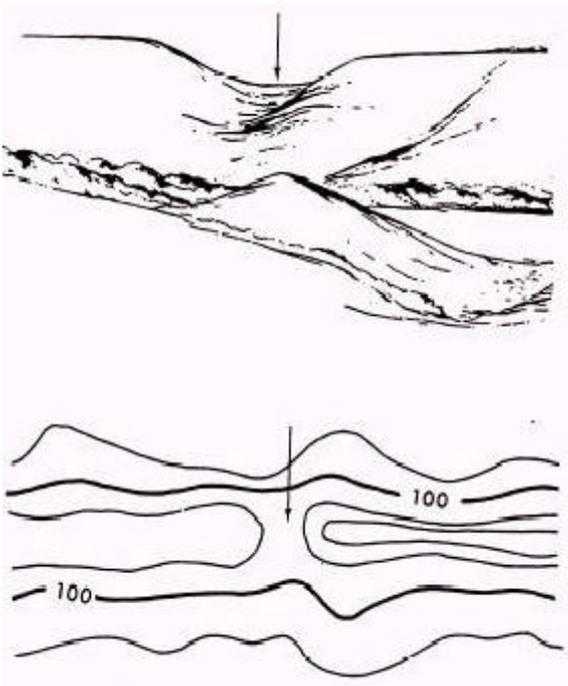
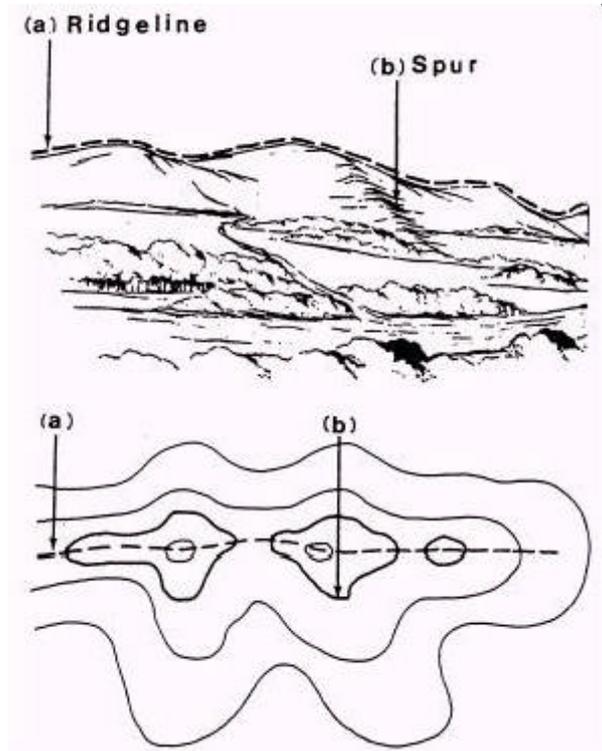
DRAW. A draw is a less developed course of a stream in which there is essentially no level ground and, therefore, little or no manoeuvring room within its confines. The ground slopes upward on each side and toward the head of the draw. Draws occur frequently along the sides of ridges at right angles to the valleys between them. Contours indicating a draw are V-shaped, with the point of the V toward the head of the draw.



## (a) Ridge; (b) Spur

**RIDGE.** Normally, a ridge is a line of high ground with minor variations along its crest. The ridge is not simply a line of hills; all points of the ridge crest are appreciably higher than the ground on both sides of the ridge.

**SPUR.** A spur is a short, continuously sloping line of higher ground normally jutting out from the side of a ridge. A spur is often formed by two roughly parallel streams cutting draws down the side of a ridge.

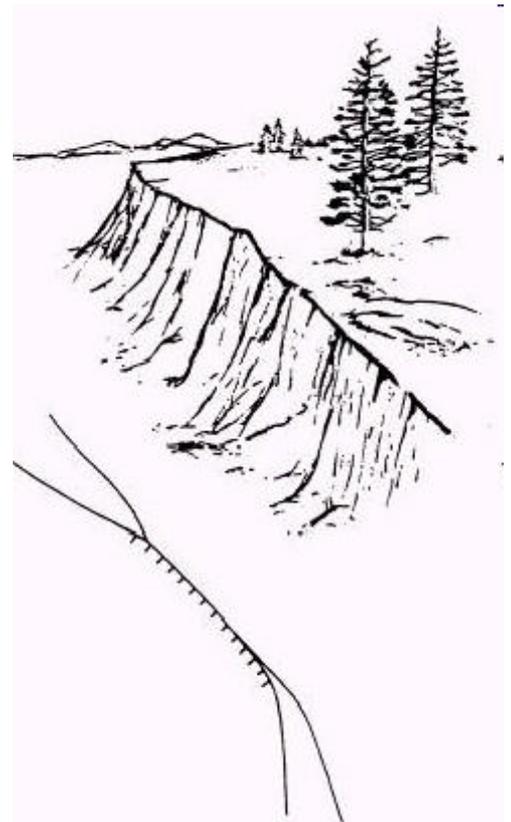


## Saddle

**SADDLE.** A saddle is a dip or low point along the crest of a ridge. A saddle is not necessarily the lower ground between two hilltops; it may be simply a dip or break along an otherwise level ridge crest.

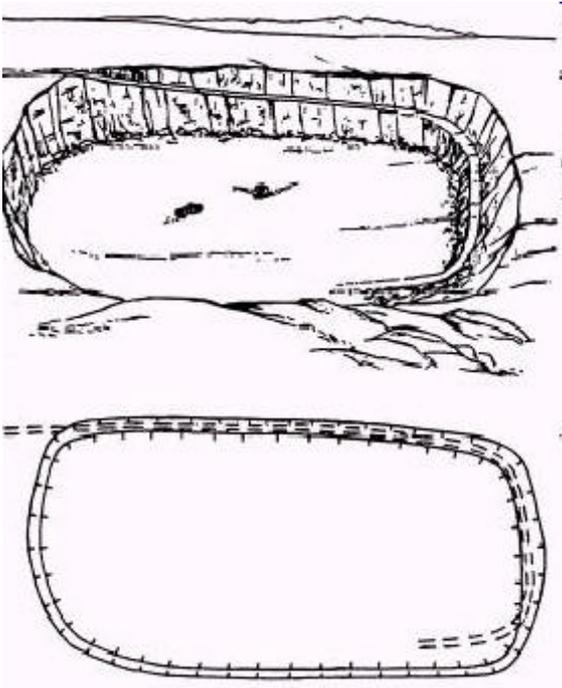
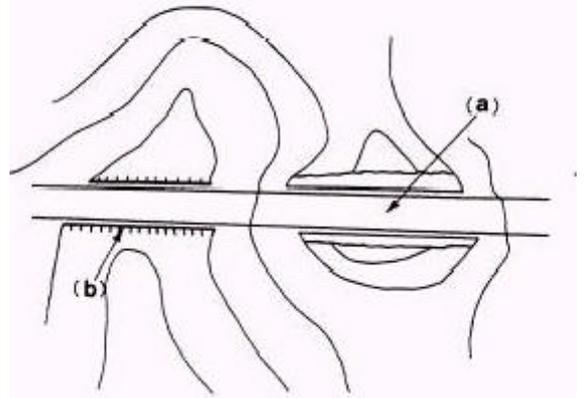
## Cliff

**CLIFF.** A cliff is a vertical or near vertical slope. When a slope is so steep that it cannot be shown at the contour interval without the contours coming together, it is shown by a ticked "carrying" contour or contours. The ticks always point toward lower ground.



## Cuts & Fills

CUTS and FILLS. Cuts and fills are man-made features caused when the bed of a road or railroad is graded or levelled by cutting through high areas and filling in low areas along the right-of-way.



## Depression

DEPRESSION. A depression is a low point or a sinkhole, surrounded on all sides by higher ground

# Contour Quick Test

When the contour lines of a hill are far apart at first, then come close together, the hill is \_\_\_\_\_. The hill will be easy to climb at first, but then it gets steep.

When the contour lines of a hill are close together at first, then get farther apart, the hill is \_\_\_\_\_. The hill will be hard to climb at first, but then it becomes easy.

A ridge or spur is denoted on a map by the contour lines becoming (U/V)-shaped.

When a contour line crosses a river or stream, they take on a (U/V)-shape.

When successive contour lines are far apart and evenly spaced, this is a (gentle/steep) slope or hill.

When a contour line crosses a stream it will take on a V-shape with the point of the V pointing \_\_\_\_\_. Downhill/uphill

When the contour lines form a U-shape they denote a ridge or spur, with the bottom of the U pointing \_\_\_\_\_. Downhill/uphill

This feature is shown by successive contour lines drawn very close together.

When contour lines are far apart, the slope of the hill is (gentle/steep).

When contour lines are close together, the slope of the hill is (gentle/steep).

When successive contour lines are close together, this is a (gentle/steep) slope or hill.

A feature shown on a map by the contour lines becoming V-shaped. The V points uphill.

track

A term for an unimproved road.

Reentrant

A small valley. If you are standing at the bottom facing into one of these, the land slopes up in front of you and on both sides, and slopes down behind you. Sometimes difficult to see in wooded areas. It appears as loop or hump in the contour lines.

Spur

A point of land projecting out into the lower terrain below. Standing at the tip of one of these, the land drops in front of you and on both sides, but is relatively flat behind you.

Knoll

A small hill. It should only designate features one contour or less in height, but the term is sometimes casually used to describe larger features. Depending on its size, it is shown on the map as a contour line or a brown dot.

Boulder

A free standing rock, large enough to be distinguished from its surroundings. It is mapped as a black dot.

Cliff

A vertical or nearly vertical feature. Shown on the map by a black bar with teeth -- it looks like a comb.

Ruin

The remains of a man-made structure, often little more than a stone foundation. Usually are made of stone or concrete.

cliff

This feature is shown by successive contour lines drawn very close together.

V

When a contour line crosses a river or stream, they take on a V-shape.

uphill

When a contour line crosses a stream it will take on a V-shape with the point of the V pointing uphill.

U

A ridge or spur is denoted on a map by the contour lines becoming U-shaped.

downhill

When the contour lines form a U-shape they denote a ridge or spur, with the bottom of the U pointing downhill.

concave

When the contour lines of a hill are far apart at first, then come close together. The hill will be easy to climb at first, but then it gets steep.

convex

When the contour lines of a hill are close together at first, then get farther apart. The hill will be hard to climb at first, but then it becomes easy.

valley

A feature shown on a map by the contour lines becoming V-shaped. The V points uphill.

Gentle

When contour lines are far apart, the slope of the hill is gentle.

steep

When contour lines are close together, the slope of the hill is steep.