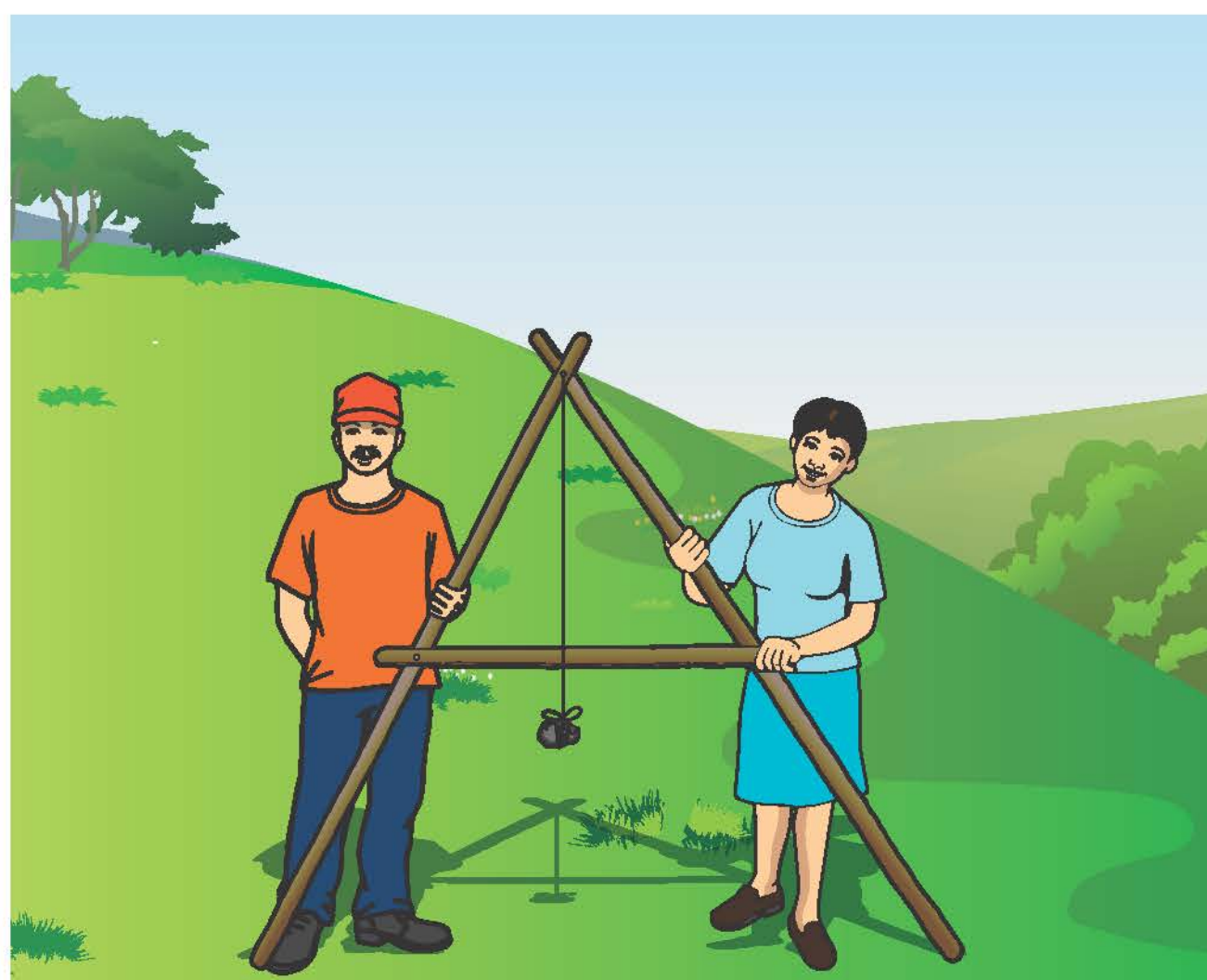
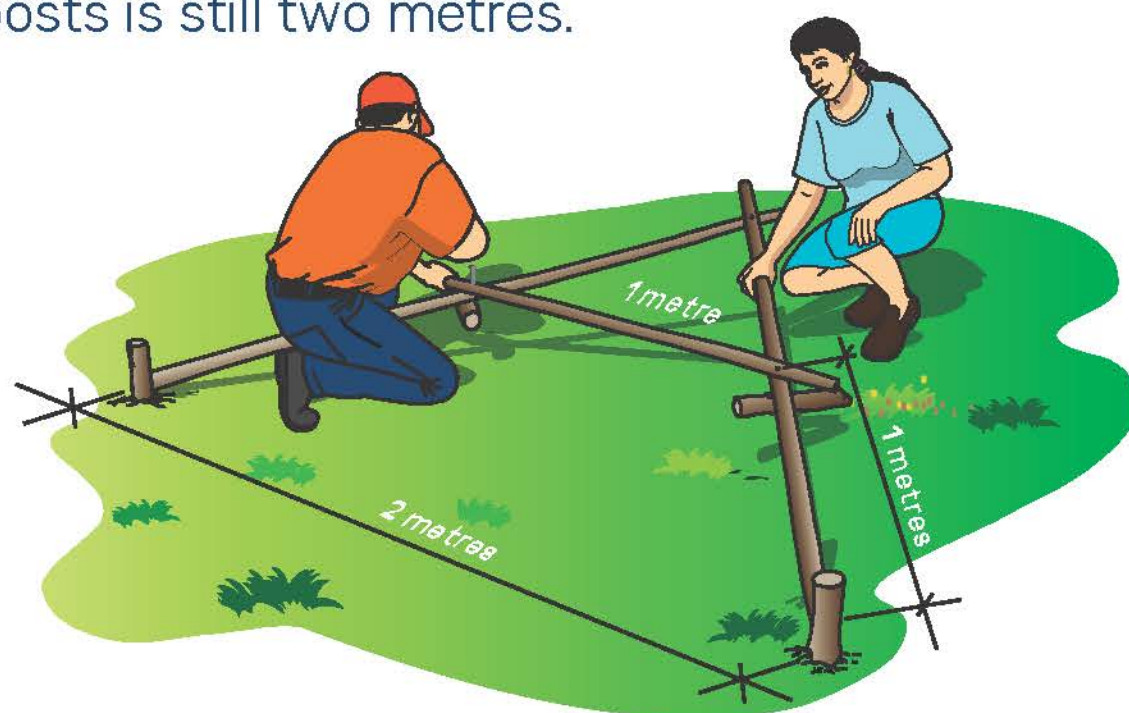


To lay out a slope contour, there is a simple tool that you can make yourself. It has the shape of a capital "A", which is why it's called an **A-frame**.



### 3. Measure the place of the crossbar and nail it on

- Once nailed, spread the two posts open on the ground until they measure about two metres from end to end.
- Nail the crossbar one metre from the end of each leg. Make sure that the frame has not closed at all so that the distance between the ends of the two posts is still two metres.



### 1. Prepare the tools and materials

To make an A-frame, you need:

- 1 hammer
- 1 machete or saw
- 1 tape measure
- 2 two-metre long posts, poles or sticks
- 1 x 1.10 metre long crossbar
- 1 two-and-a-half metre long string
- 2 short 30-centimetre stakes
- 3 x 3-inch nails



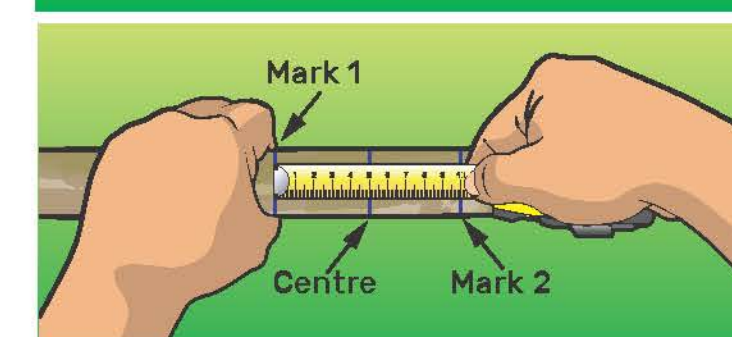
### 2. Cut and nail the two legs

- Cut two poles of the same length (two metres). These long poles will be the legs of the A-frame.
- Place the legs one on top of the other and nail them together five centimetres below one end, letting the nail protrude a little.



### 4. Tie and calibrate the plumb line

- Tie the string to the nail at the top where the two legs intersect. Tie a stone to the other end so that it hangs at least a quarter below the crossbar.
- To calibrate the A-frame, sharpen the stakes with the machete and drive them into the ground two metres apart. Position the legs of the A-frame on the stakes.
- After making sure that the A-frame is vertical so that the plumb line does not touch the crossbar, make a mark with a pencil or the machete on the place where the string hangs down over the crossbar.
- Turn the A-frame around completely so that each leg is placed on the stake where the opposite leg was.
- Using a pencil or the machete, mark the place where the plumb line passes the crossbar now. With the help of the tape measure and a pen, mark the midpoint between the two previous marks on the crossbar. When the plumb line hangs over this mark, it indicates that the A-frame, and therefore the terrain, is level.



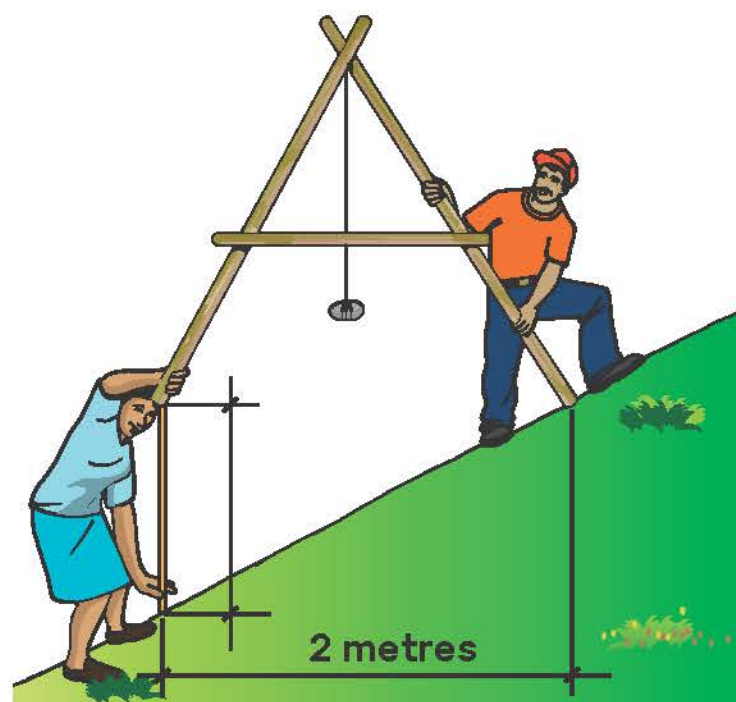


# Step by step: Laying out slope contours

A slope contour is an imaginary line where all points are on the same level. In other words if a person follows this line, they'll never go up or down.

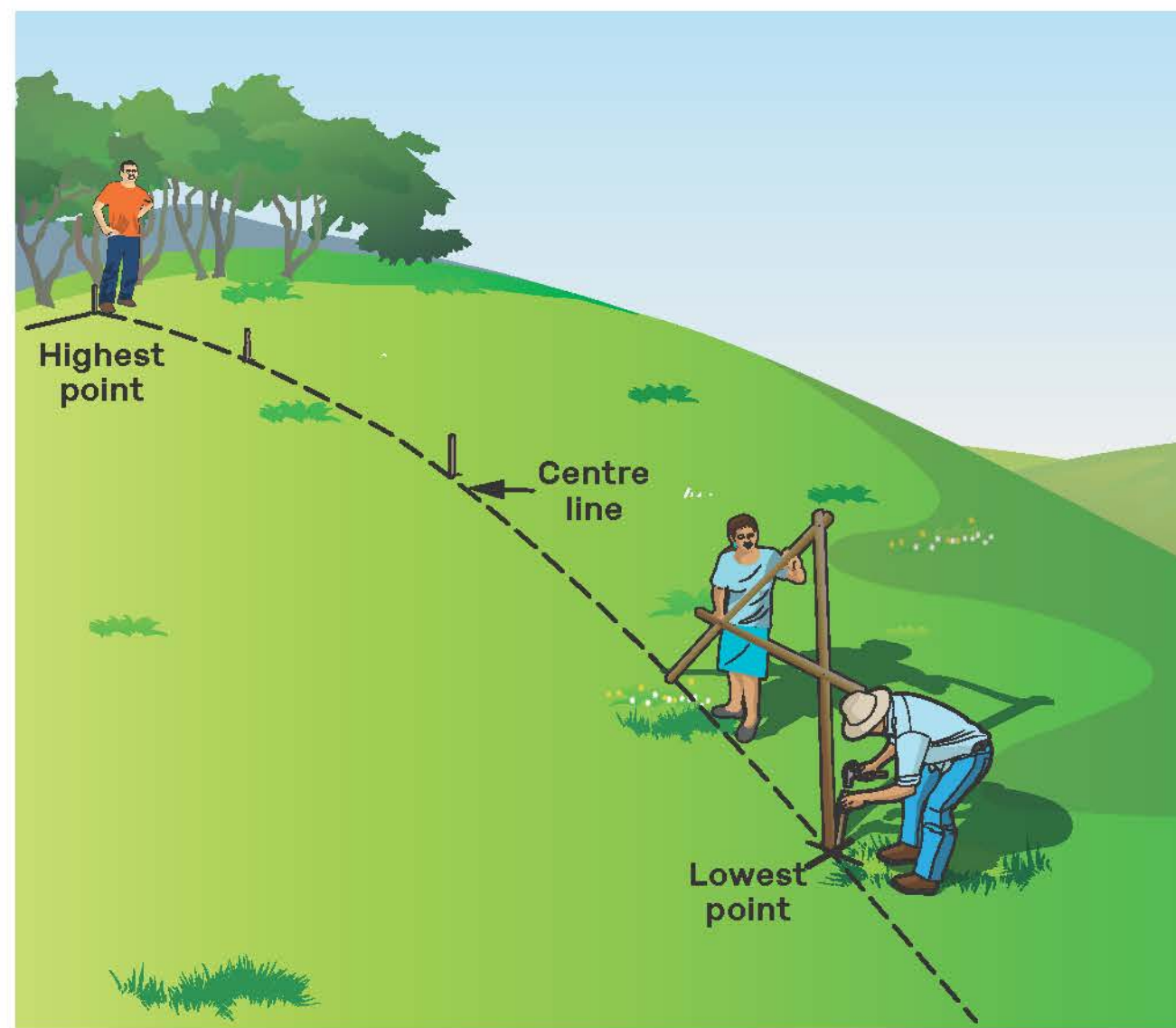
## 1. Measuring the percent slope

- The percent slope of a terrain is the number of metres that you descend or go up whenever you walk 100 metres in the direction of the slope.
- To measure the percent slope at one point of the plot, place the A-frame with one leg on the ground and the other in the air, perpendicular to the ground, pointing towards the lower part of the plot.
- Measure the distance between the ground and the end of the leg in the air. Divide the result in centimetres by two to obtain the percent slope.
- Repeat this measurement five times, at five different points throughout the whole plot.
- Get the average of the five measurements by dividing the sum of the five measurements by five.



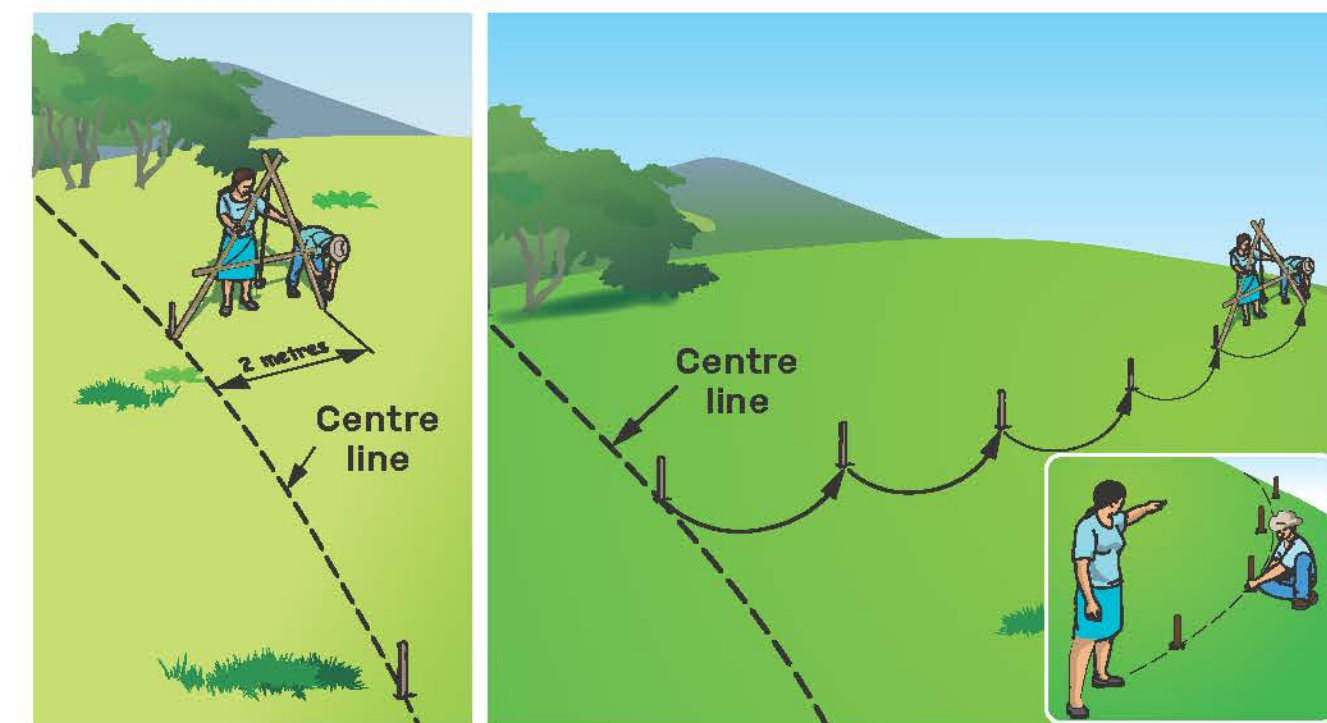
## 2. Lay out the centre line

- To measure the distance between contours, you need to first mark a line through the centre of the plot, called the centre line, which goes from the highest to the lowest point of the terrain.
- For that, a person stands at the highest point, a second at the lowest point, and a third comes down with the A-frame. If the slope is 40%, the distance between contours should be 6 metres, so for every 6 metres or 3 steps taken with the A-frame, place a stake aligned on the centre line that runs between the other two people.



## 3. Lay out the first contour line

- With one leg of the A-frame set on the first stake on the centre line, move the other leg up or down to get the plumb line of the A-frame level. When you find the midpoint, use a stake to mark the spot of the leg you moved.
- Repeat this process until you reach the edge of the plot. Afterwards, return to the first stake on the centre line and follow the same procedure until you reach the opposite edge of the plot.
- If the line "snakes" a lot, you need to correct the staking. By sight, try to line up by groups of ten the stakes that seem to be too high or too low on a middle line.
- Then proceed with the next contour lines, starting each time from the next stake on the centre line.



According to the average, the following table will give you the recommended distance between contour lines.

Percent slope	Distance between contour lines (in metres)
2%	30
5%	28
8%	24
10%	20
14%	18
16%	16
20%	14
25%	12
30%	10
35%	8
40%	6
45%	4

## Recommendations

- You only need to make contour lines that correspond to the conservation works you can build during the week. Otherwise, the stakes of the other contours can be lost.
- Always start building the conservation works from top to bottom of the terrain.

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