

Loci

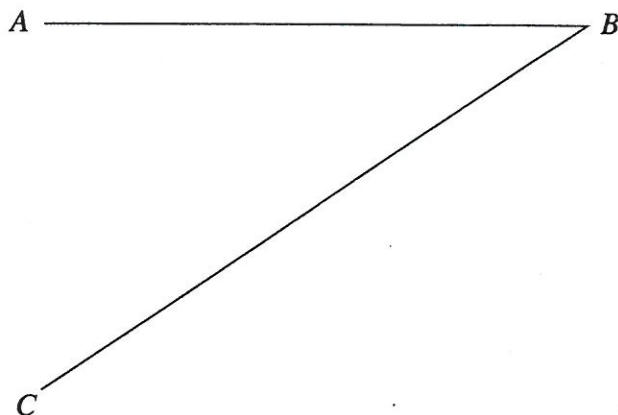
①

The diagram below is drawn accurately. It shows two straight lines AB and BC .

P is a point such that P is equidistant from points A and B .

P is also 4 cm from the line BC .

Plot the point P accurately on the diagram. You should show how you find the position of point P .



[3]

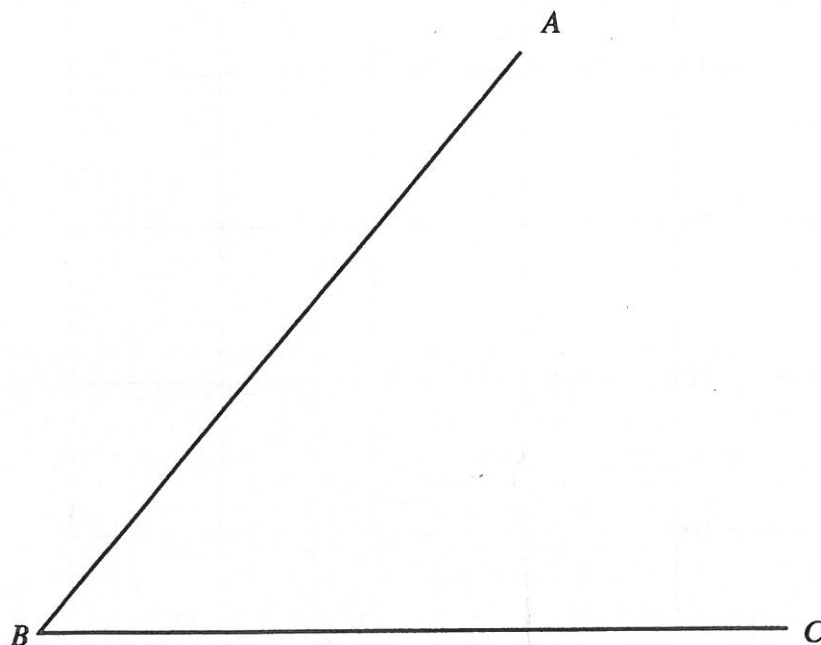
②

Find and shade the region of points that satisfy both of the following conditions.

(i) The points are nearer to BC than to AB .

(ii) The points are less than 6 cm from A .

[3]

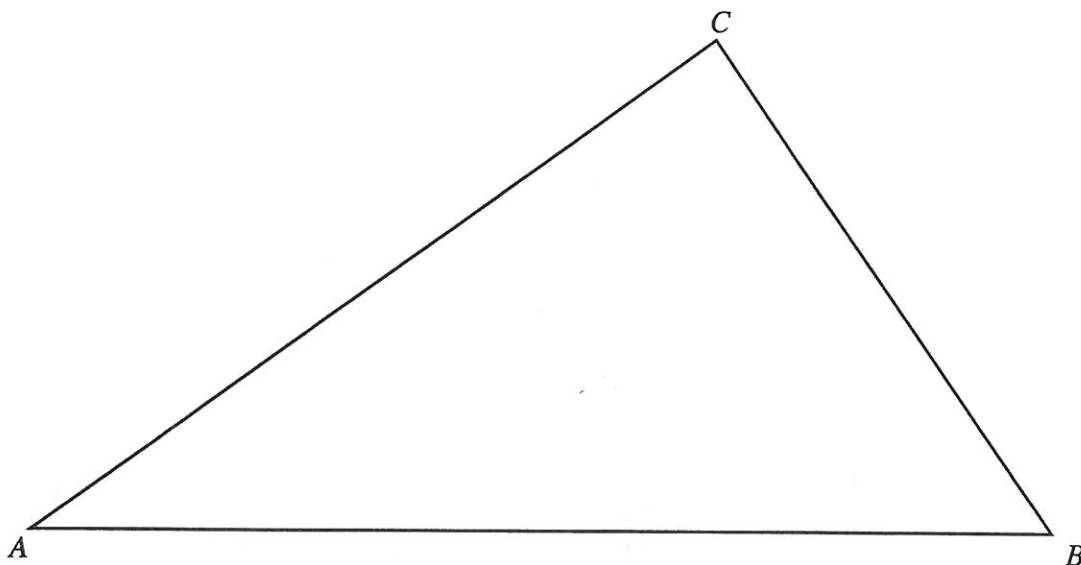


3

Shade in the region of points inside the triangle ABC which satisfy **both** of the following conditions.

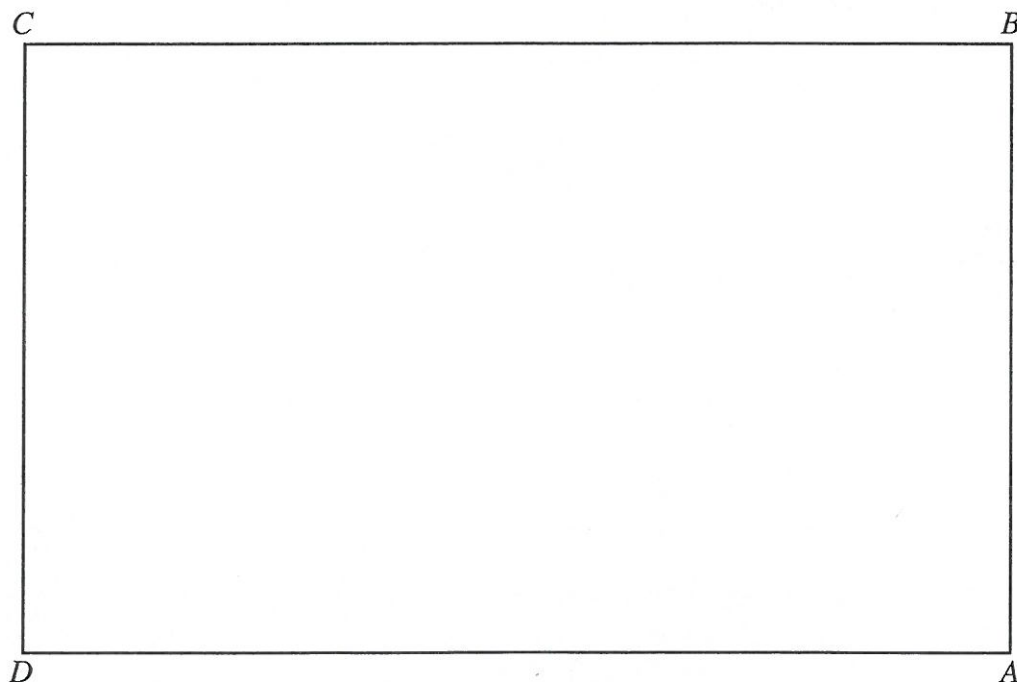
- (i) The points are nearer the point A than the point B
 and (ii) the points are further from B than the distance BC .

[3]



4

$ABCD$ is a rectangle.



- (a) Draw the locus of all the points inside the rectangle whose distance from AB is the same as their distance from AD .
 (b) Draw the locus of all the points inside the rectangle which are 6 cm from DC .
 (c) Draw the locus of all the points inside the rectangle whose distance from A is the same as the length of AB .

[3]

5

Enid and George hide a box in their garden. They make a map of the garden, using a scale of 1 cm to represent 1 m. They give the map to some friends together with the following clues.

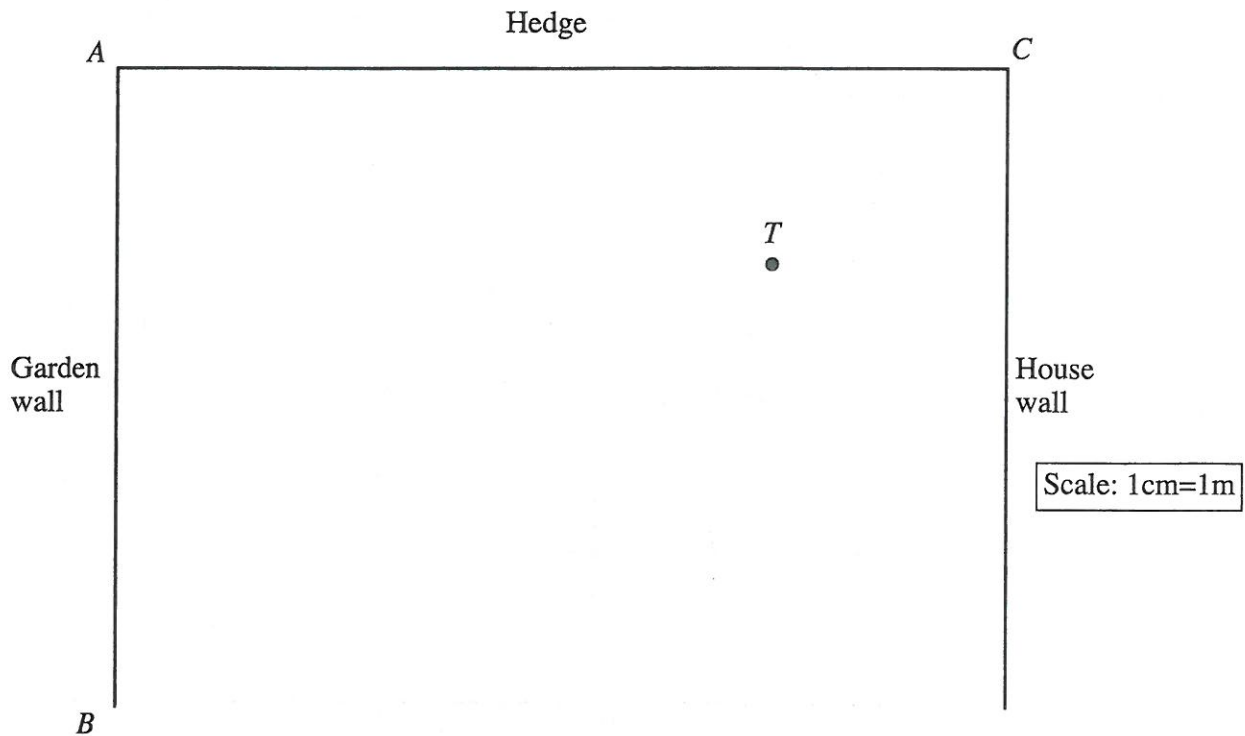
The box is nearer the end A of the hedge than the end C .

The box is less than 6 m away from the tree marked T .

The box is nearer the garden wall AB than the hedge AC .

On the map shown below, shade the region of the garden in which the box is hidden.

[4]

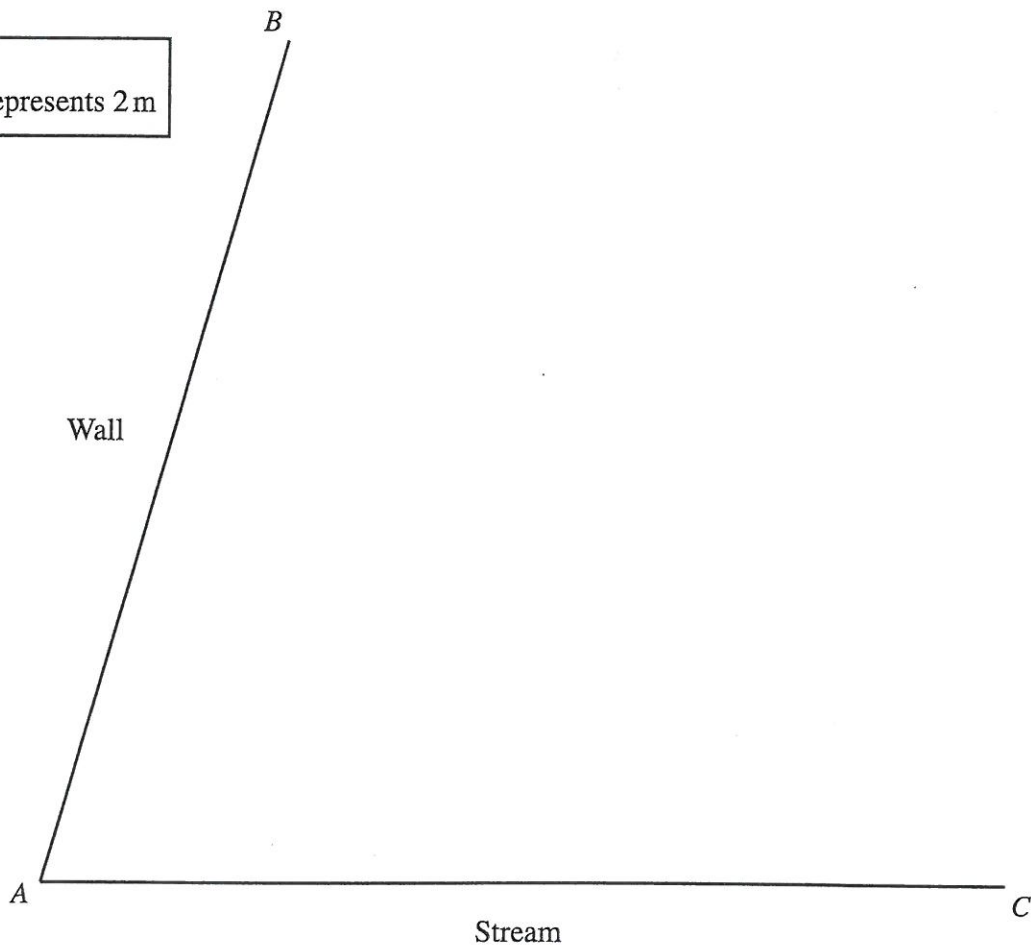


6

The diagram represents two boundaries of Mr. Lotwick's garden. AB is a wall and AC is the edge of a stream. He wants to plant some trees in the garden so that they are further than 8 metres from the stream. He also wants them nearer the wall than the stream and less than 20 metres from C . Using 1 cm to represent 2 m, show on your diagram the region in which he can plant the trees.

[4]

Scale
1 cm represents 2 m



Turn over.