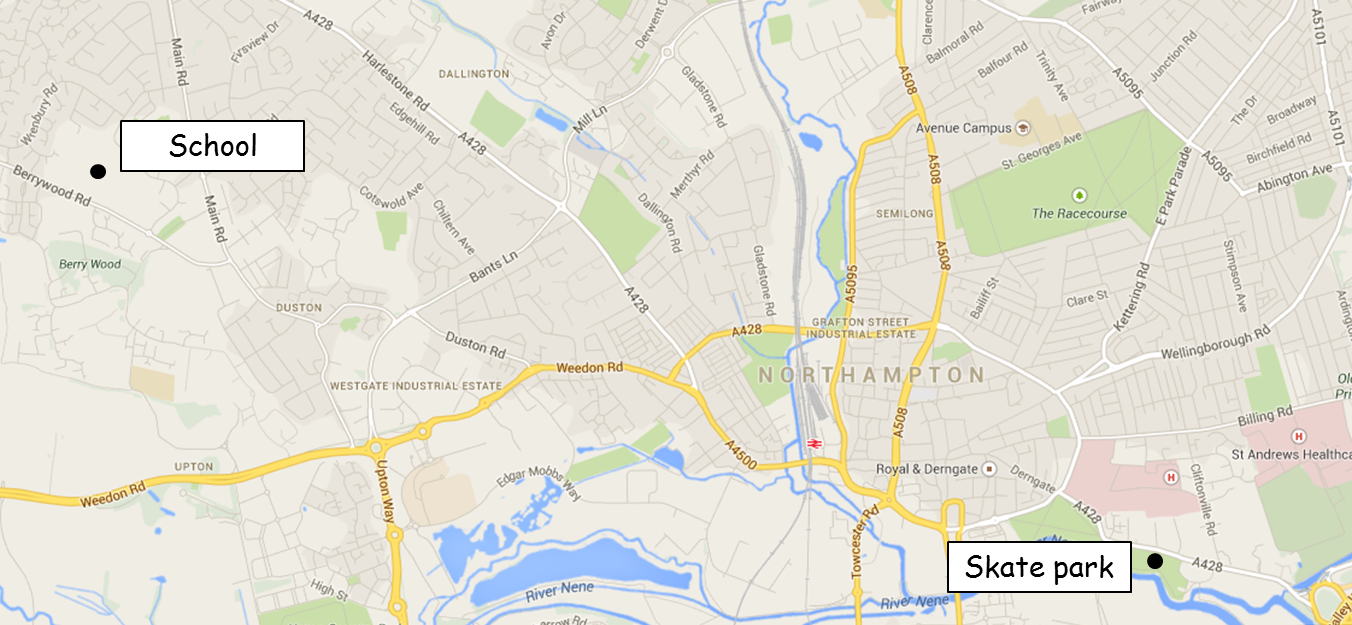
**Loci GREEN**

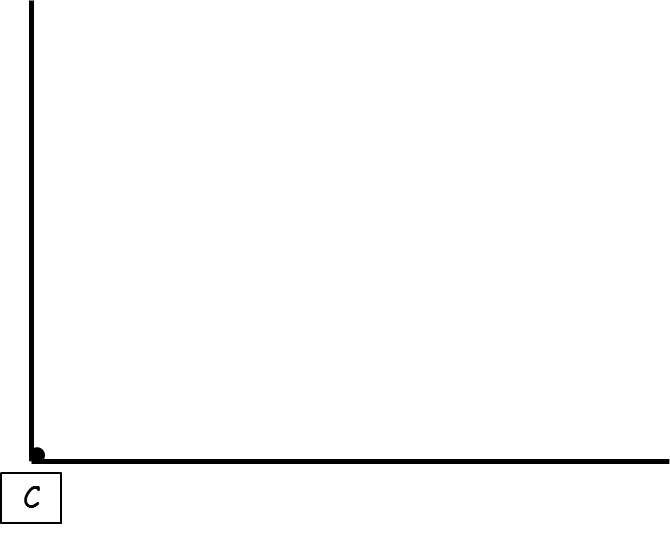
John wants to plant an apple tree in his garden. It has to be within 2 metres from his other apple tree at A. Show the region where John can plant the apple tree. Use the scale 1cm : 1m.



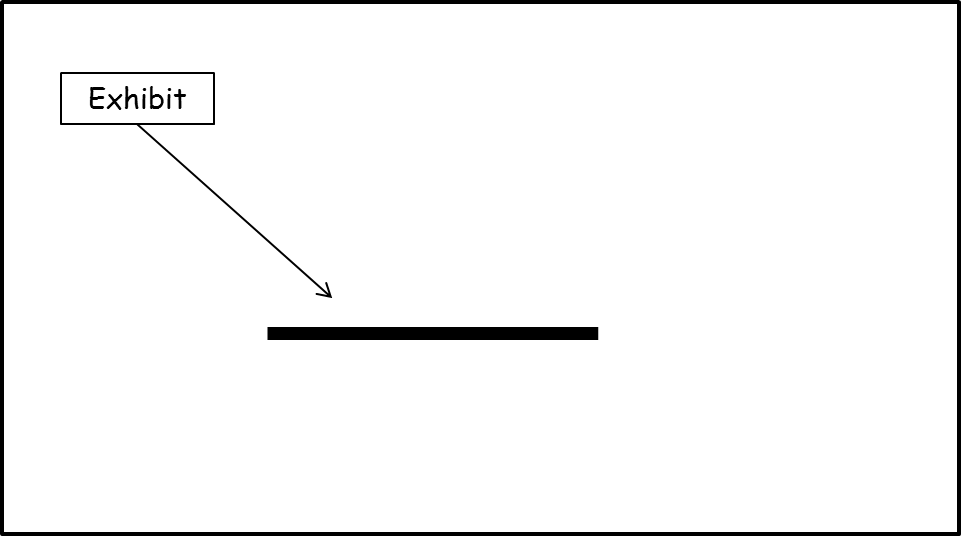
Robert’s house is equidistant from his school and the skate park. Show on the map where Robert’s house could be.



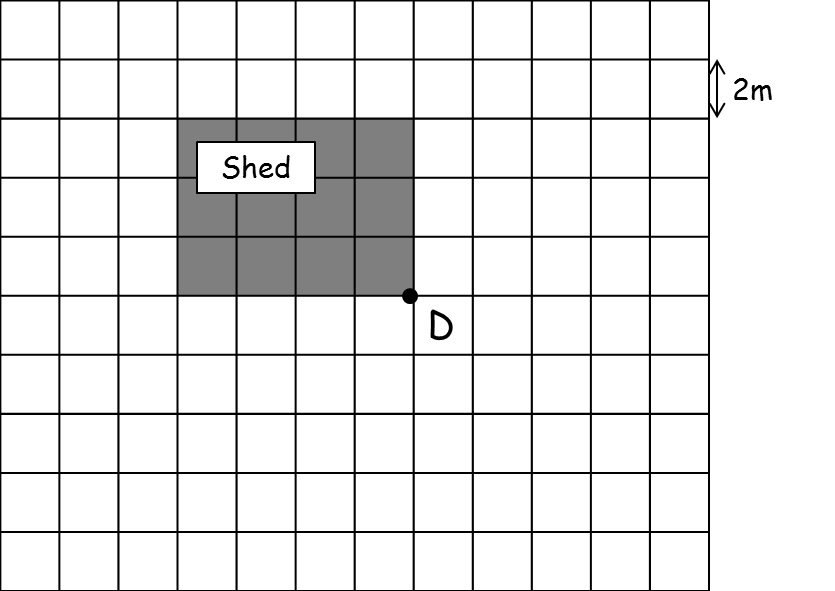
Katie rolls a ball from the corner of the room, C. She wants the ball to remain equidistant from the two walls. Show the direction she must roll the ball.



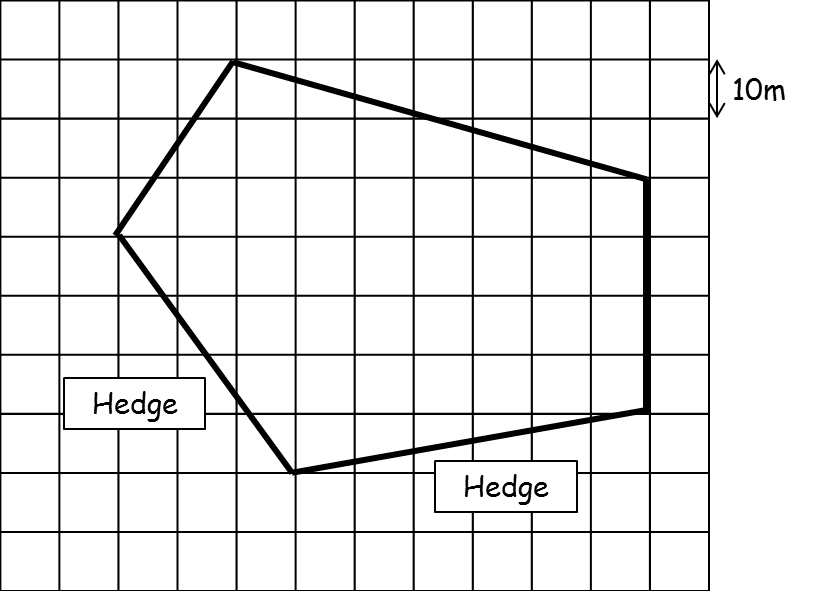
A guard is patrolling an exhibit in a museum. In order to protect the exhibit, he must stay 2 metres away at all times. Show the area the guard must patrol. Use the scale 1cm : 1m.



My pet dog is tied to my shed on a rope that stretches 10 metres. Show the area that the dog can reach. Use the scale shown on the diagram.



A farmer wants to put a sprinkler in his field (shown below). It has to be connected to the pipe that runs equidistant from the hedges across the field. The sprinkler must be exactly halfway along the pipe. The sprinkler can water the field in a radius of 40 metres. Show the area of the field the farmer can water. Use the scale shown on the diagram.



**Loci AMBER**

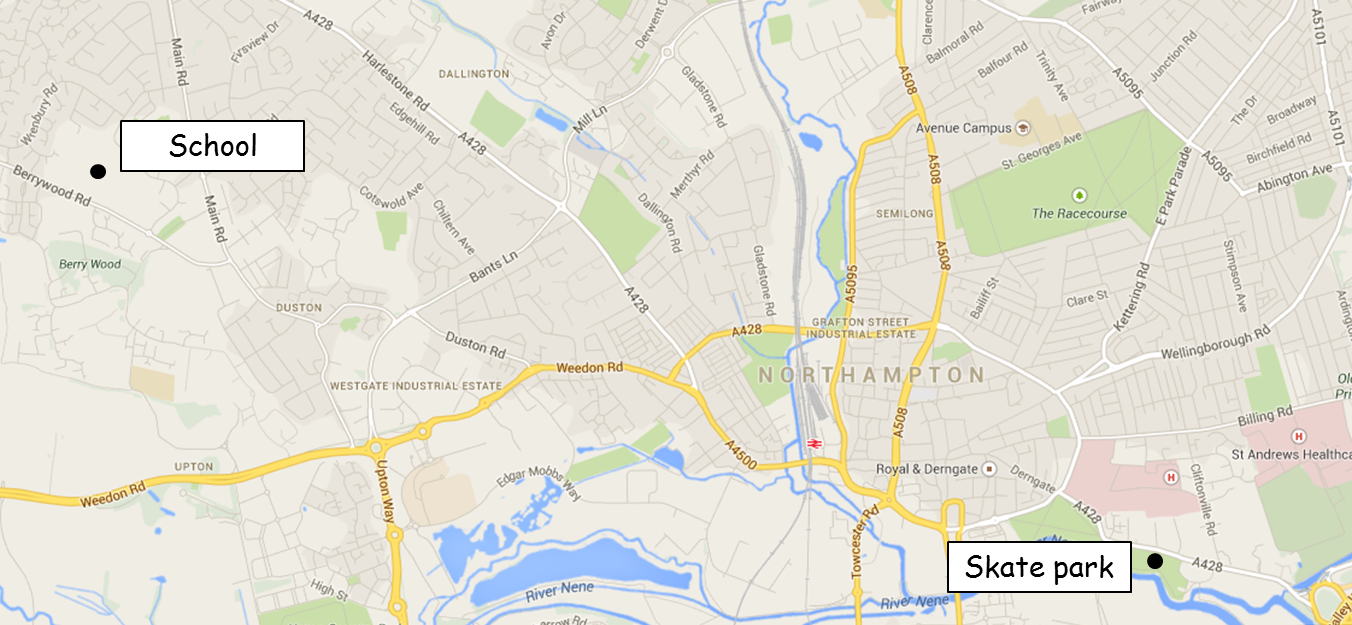
John wants to plant an apple tree in his garden. It has to be within 2 metres from his other apple tree at A. Show the region where John can plant the apple tree. Use the scale 1cm : 1m.



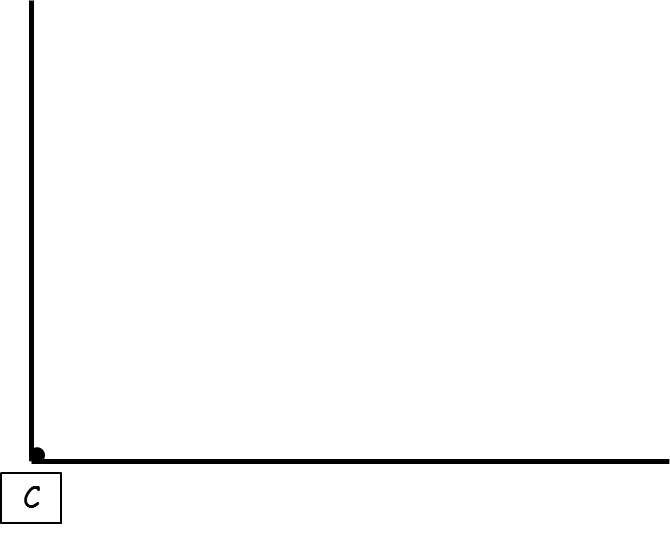
Draw the locus of all points that are 2cm away from the apple tree.

Robert’s house is equidistant from his school and the skate park. Show on the map where Robert’s house could be.

Construct the perpendicular bisector between the school and the skate park.



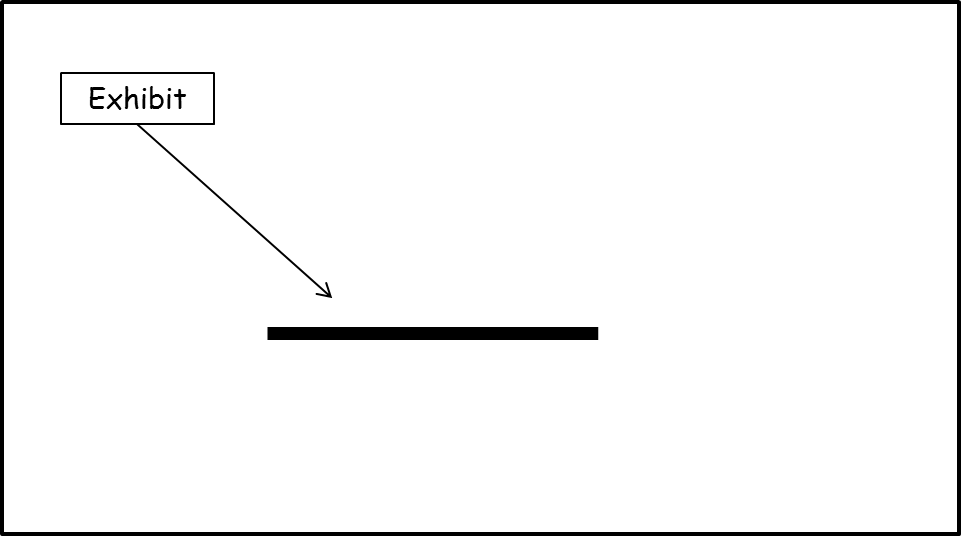
Katie rolls a ball from the corner of the room, C. She wants the ball to remain equidistant from the two walls. Show the direction she must roll the ball.



Bisect the angle at C.

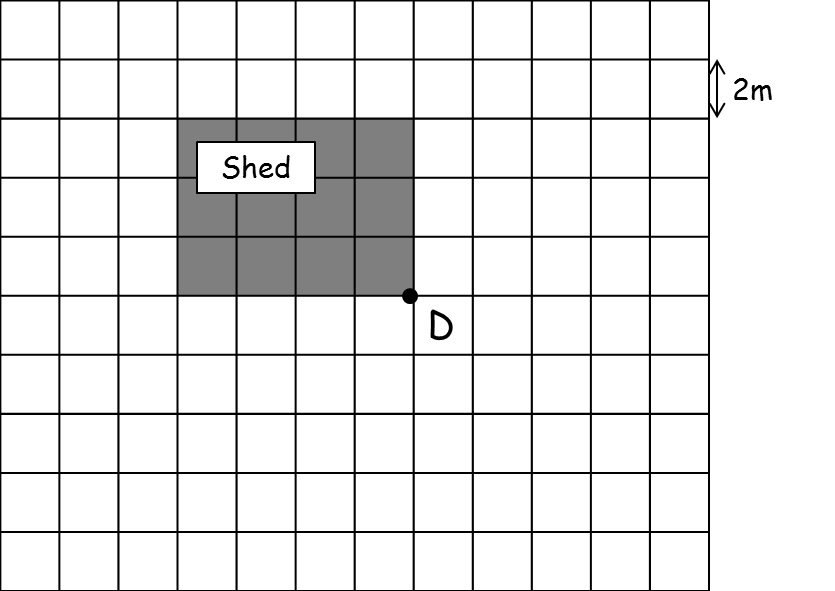
A guard is patrolling an exhibit in a museum. In order to protect the exhibit, he must stay 2 metres away at all times. Show the area the guard must patrol. Use the scale 1cm : 1m.

Draw the locus of all points that are 2cm away from the exhibit (the solid line).

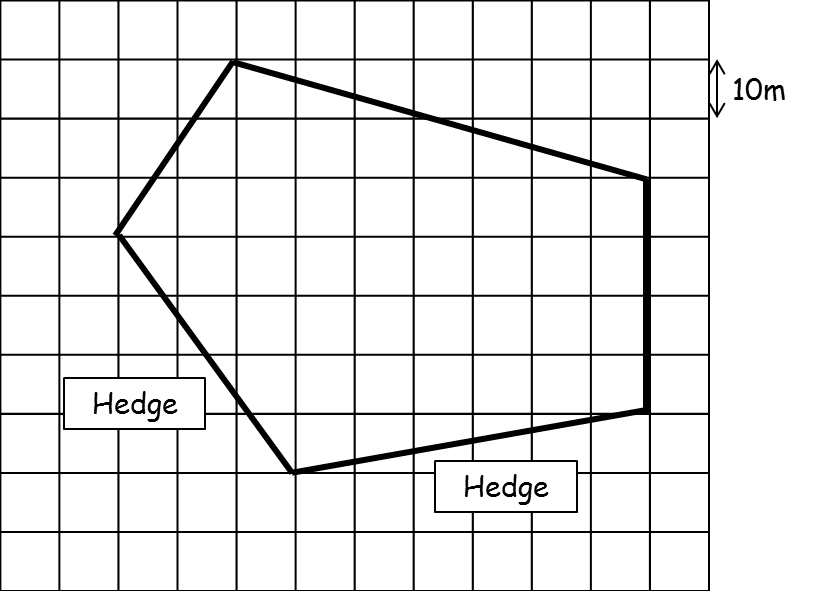


My pet dog is tied to my shed at point D on a rope that stretches 10 metres. Show the area that the dog can reach. Use the scale shown on the diagram.

Draw the locus of all points that are 10m away from the corner of the shed. Be careful, as the walls of the shed prevent the dog from going as far upwards and left as you might think!



A farmer wants to put a sprinkler in his field (shown below). It has to be connected to the pipe that runs equidistant from the hedges across the field. The sprinkler must be exactly halfway along the pipe. The sprinkler can water the field in a radius of 40 metres. Show the area of the field the farmer can water. Use the scale shown on the diagram.



1) Bisect the angle between the two hedges.

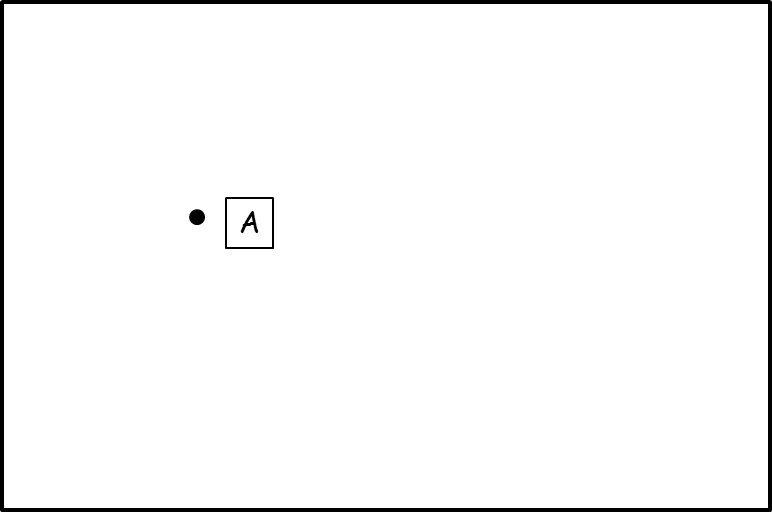
2) Bisect the line you’ve just drawn across the field.

3) Identify the location of the sprinkler.

4) Draw the locus off all points that are 40m away from the sprinkler.

**Loci RED**

Draw the locus of all points that are 2cm from A.



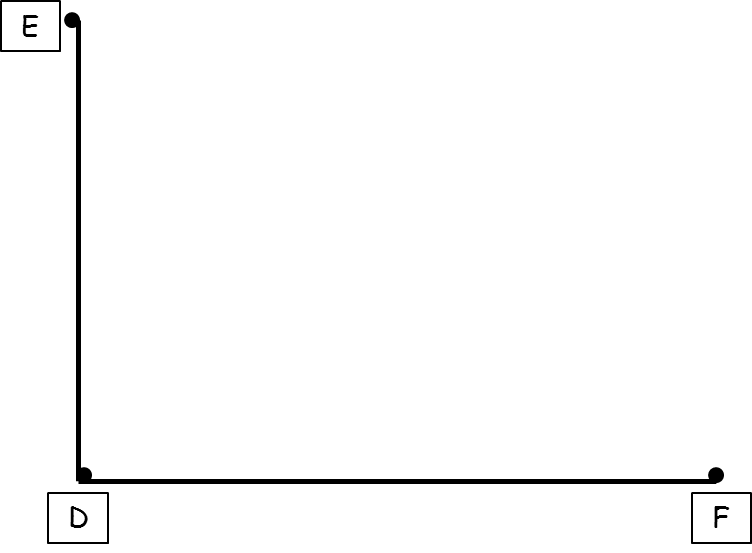
Open your compasses to a width of 2cm and draw a circle centre A, radius 2cm.

Draw a perpendicular bisector of the line BC



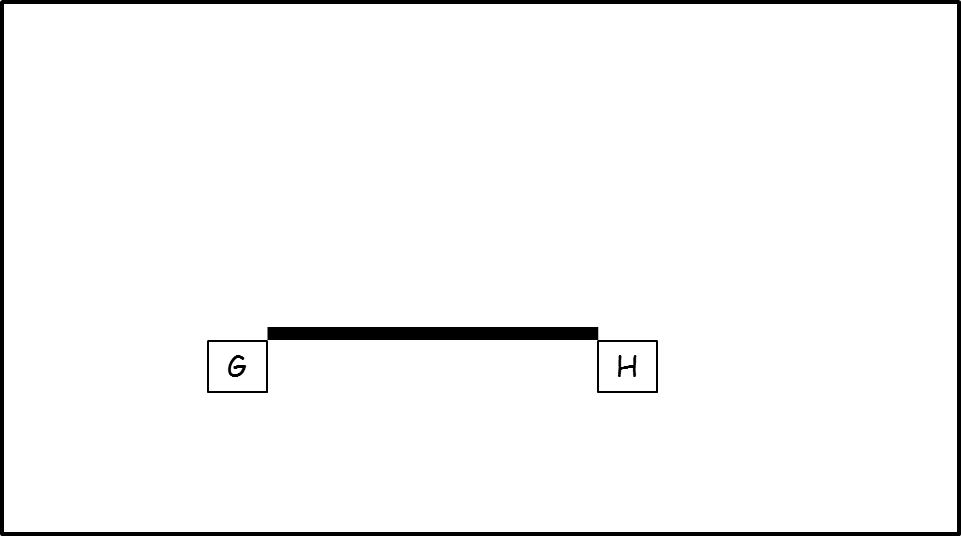
Open a pair of compasses to a distance that is slightly greater than half the distance between the points. From one point draw two arcs, one above the points and one below. Repeat this from the other point. Join where the arcs cross together.

Draw the locus of all points equidistant from the lines DE and DF.



On each line draw an arc, centred at the point where the lines cross. From each of these points draw two more arcs. Join where the arcs cross to where the lines cross.

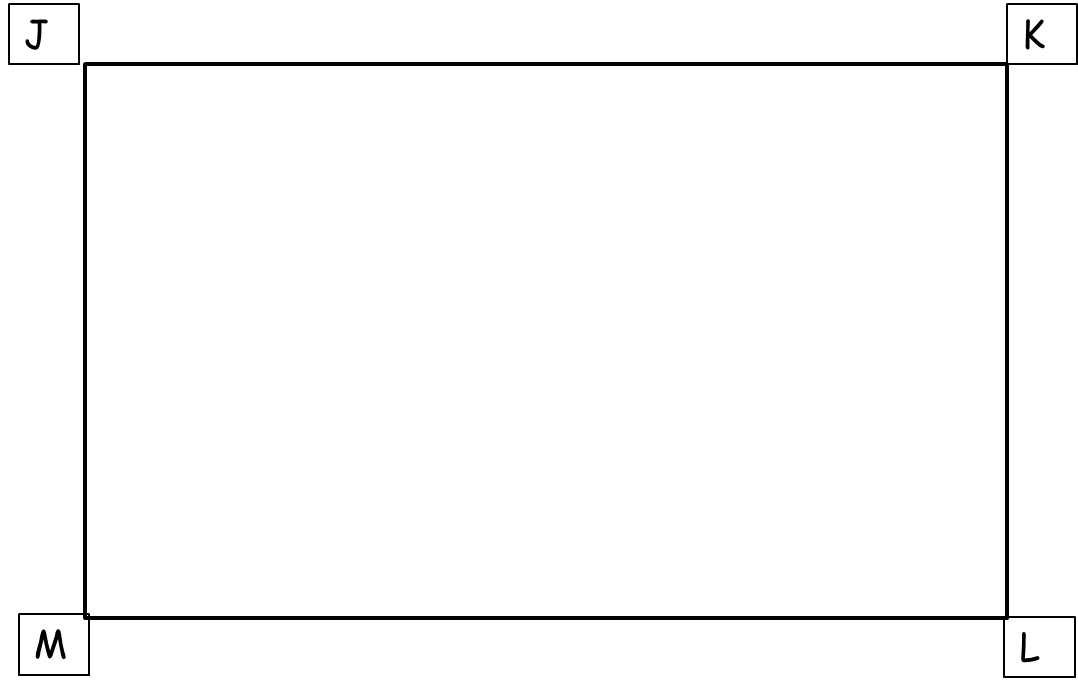
Draw the locus of all points that are 2cm away from the line GH.



Draw two parallel lines above and below GH, 2cm away. Open your compasses to 2cm and round off each of the ends. It should look a little like a race track when you have finished!

JKLM is a rectangle.  
Shade the set of points inside the rectangle which are **both**

more than 4cm from the point J   
**and** more than 2cm from the line LM.



PQR is a triangle.

Shade the region inside the triangle which is **both**

less than 4 centimetres from the point Q  
**and** closer to the line PR than the line PQ.

