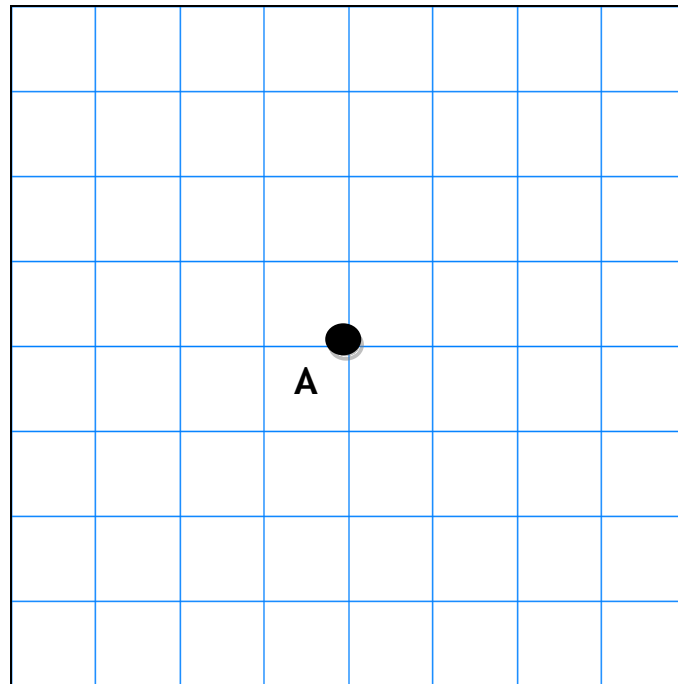


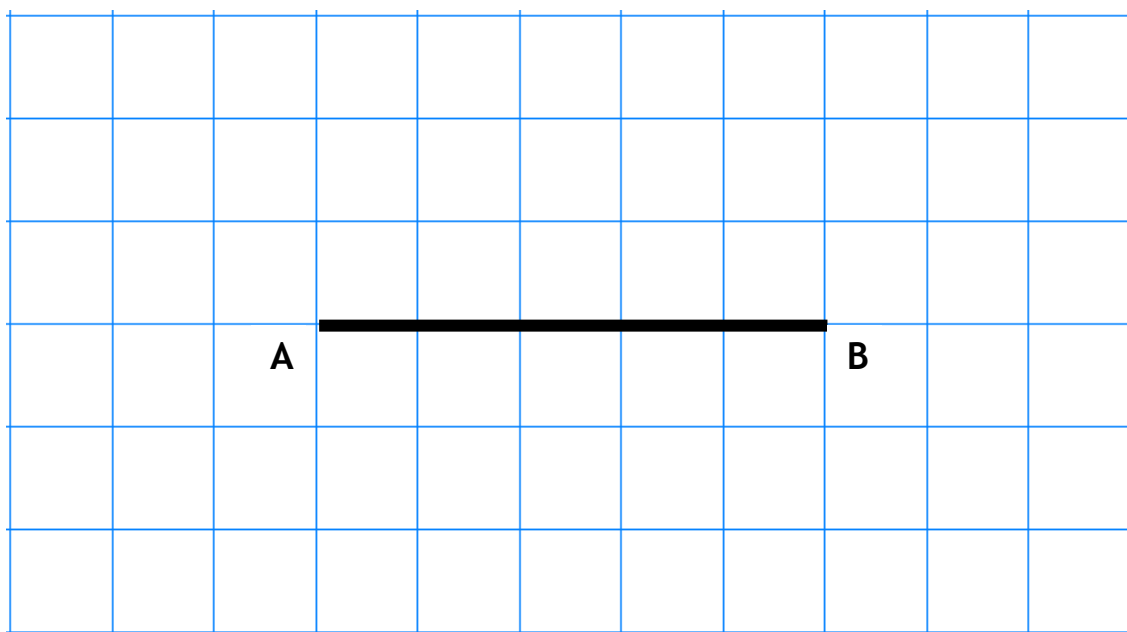
LOCI - rules with a pair of compasses

In each of the diagram let one square = 1cm

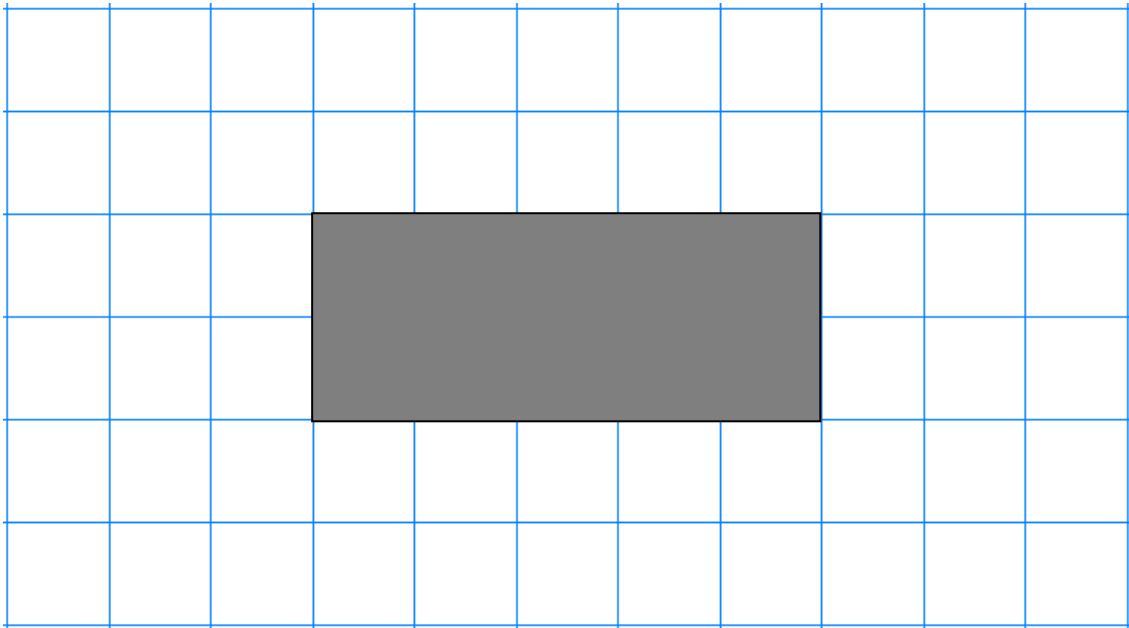
1. Draw the locus of all points that are exactly 3cm from the point A.



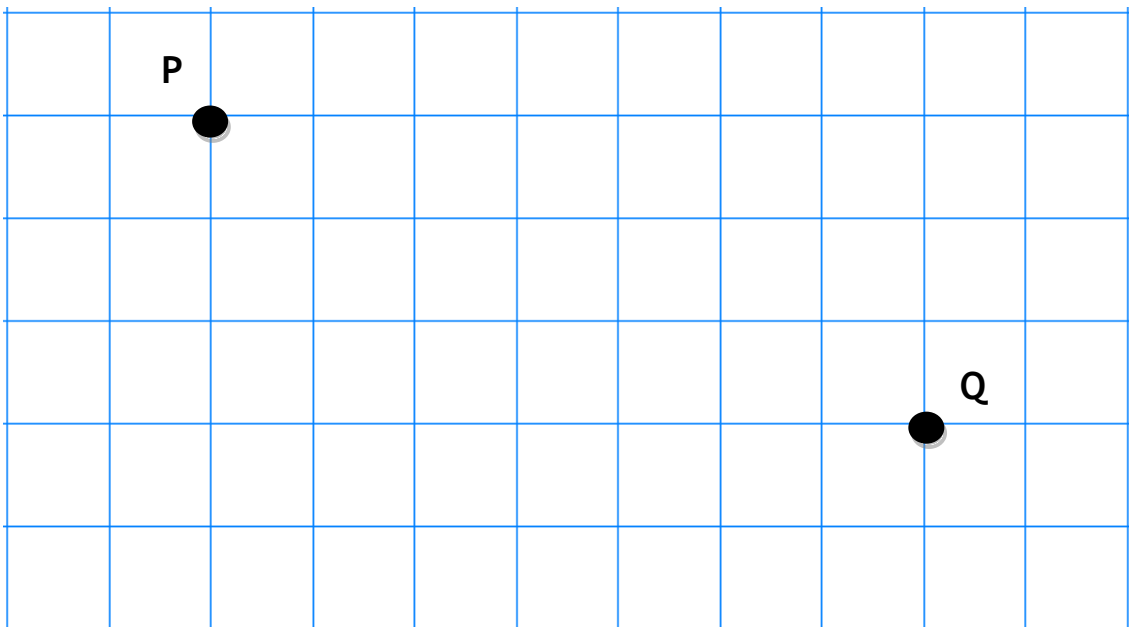
2. Draw the locus of all points that are 2 cm from the line AB.



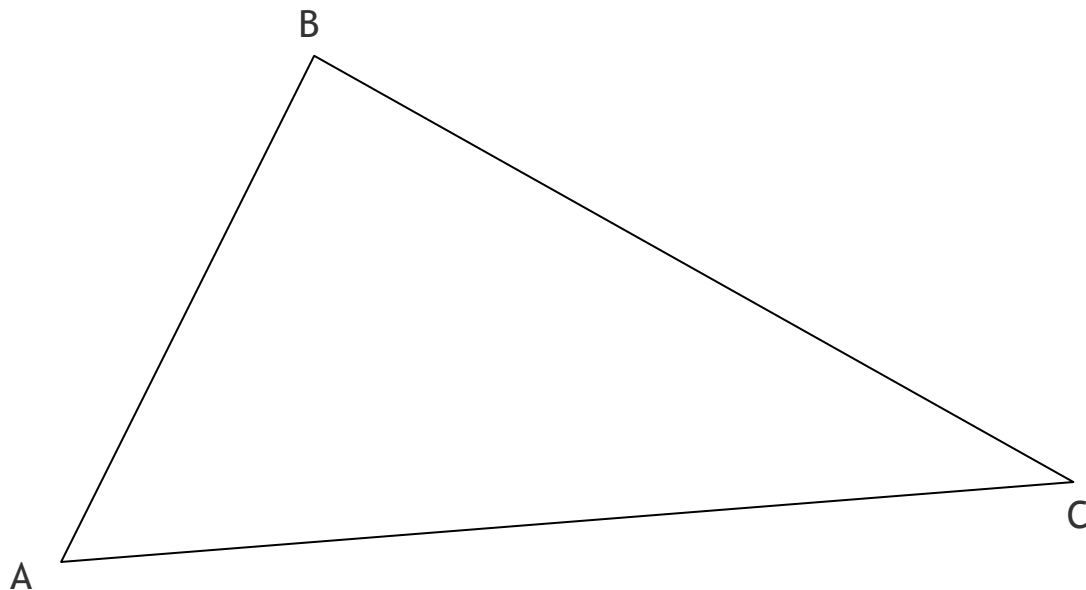
3. Draw the locus of the points that always 2cm away from the sides of this rectangle.



4. Draw the locus of all points that are equi-distant from the two points P and Q.

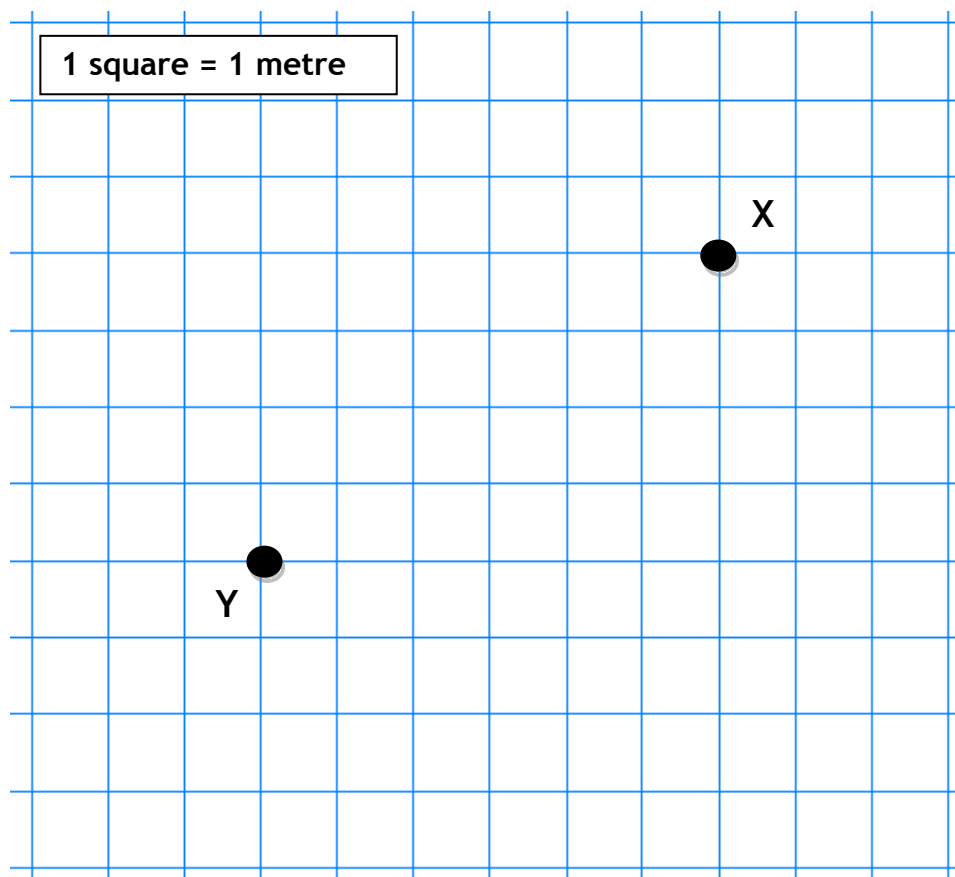


5. The diagram shows a fenced triangular field with corners A, B and C.



An underground pipe is to be laid that is to be exactly the same distance from the sides AB and AC. Construct the path that the pipe should run along.

6. A treasure island has treasure buried within 5 metres of point X and within 4 metres of point Y. Shade the area in which the treasure is buried.



7. Three towns marked P, Q and R are to have a new mobile phone tower positioned between the three towns. The tower must be exactly 40km from town P.

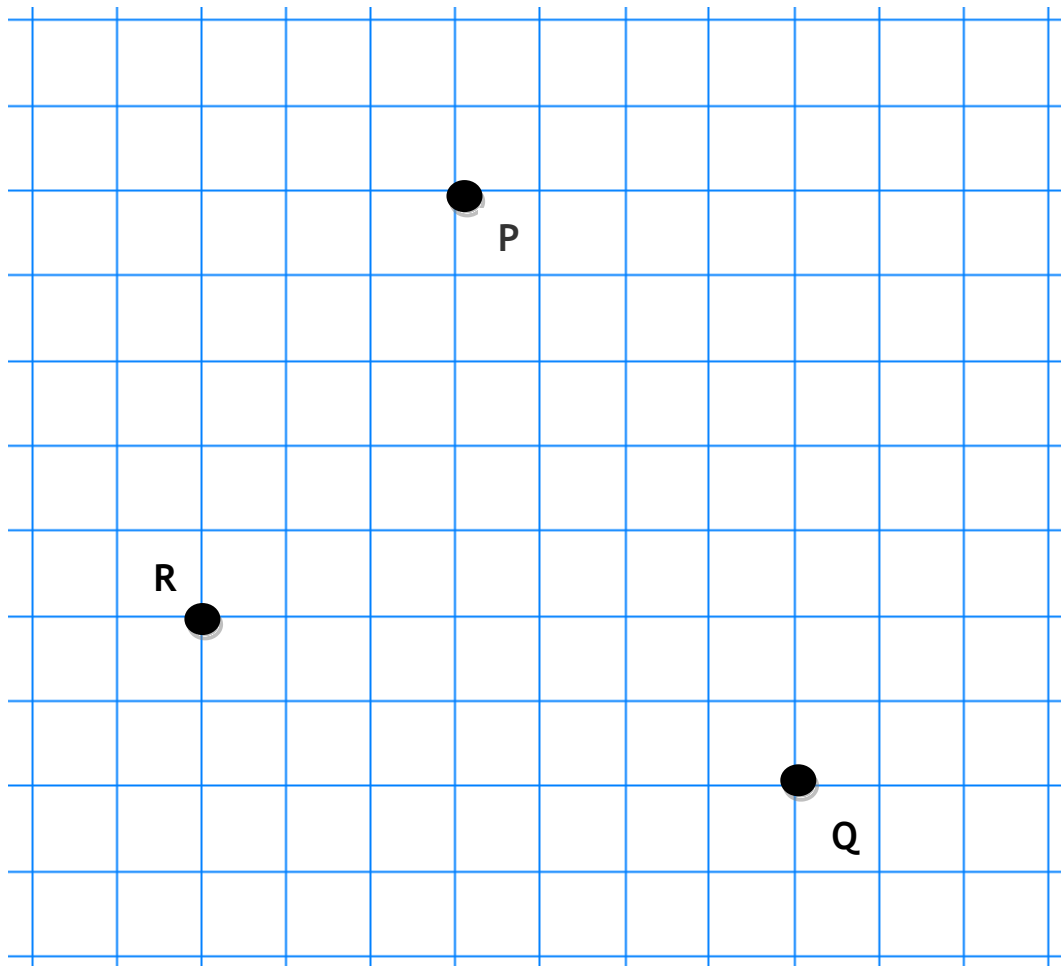
(a) On the map, draw the locus of all points that are 40km from P

The tower must also be the **same distance** from Q and R.

(b) Draw the locus of all points that are the same distance from Q and R

(c) Mark clearly with a T, the position of the new tower.

1 square = 10 kilometres



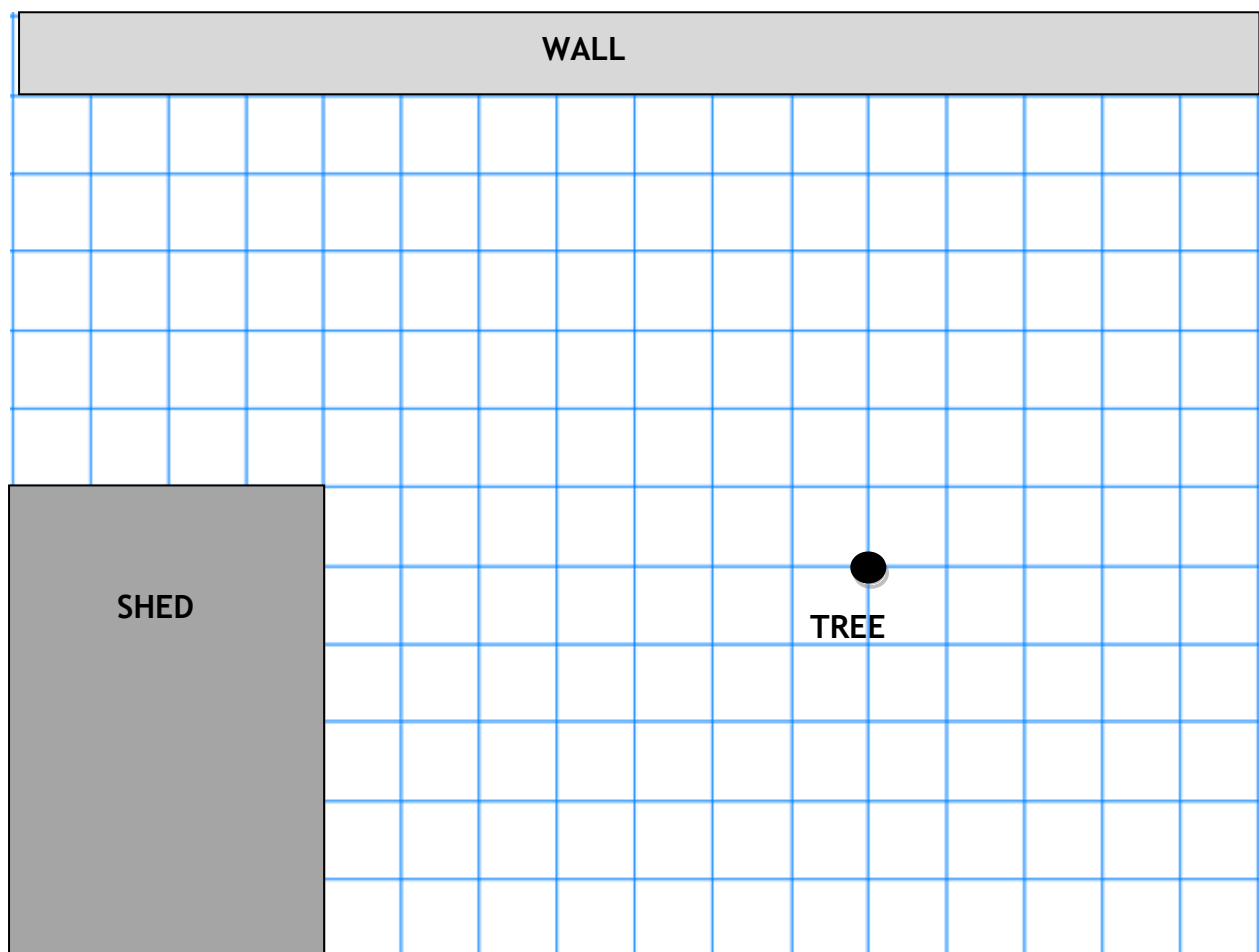
8. A gardener wishes to plant some carrots.

She cannot plant them within 3 metres of the tree as the tree absorbs all the water.

She cannot plant them within 3 metres of the wall due to shade.

She cannot plant them within 2 metres of the shed due to rain water running off the roof.

On your diagram, shade the regions where the carrots are safe to grow.



9. A tree is to be planted in the grounds of a school.
It must be at least 3 metres from the school building.
It must also be no more than 6 metres from the water tap.
It must be more than 4 metres from the centre of the pond.
Shade clearly the region where the tree may be planted

