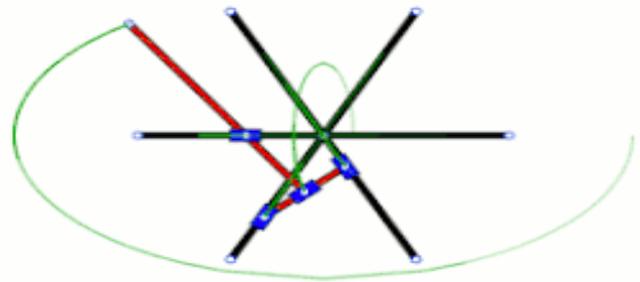


# Grade 9 Mathematics

## lesson 14 Loci and constructions

### Activities



A.N.Nirosha Chandimali Abeysiri

R/Udagama Maha Vidyalaya,Pinnawala,Balangoda

## Loci and construction

1. Draw the locus of all the points which are equidistant from the following points.
  - a. A to B. You must show construction lines.

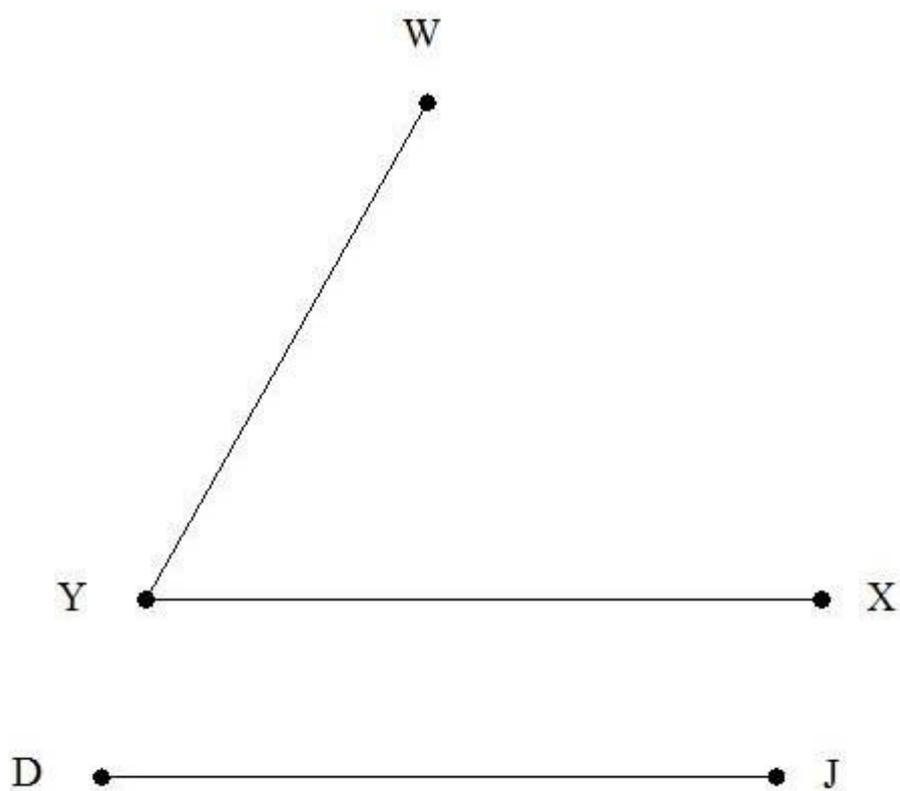


2. Draw the locus of all points that are exactly 4cm from the line XY. You must show construction lines.

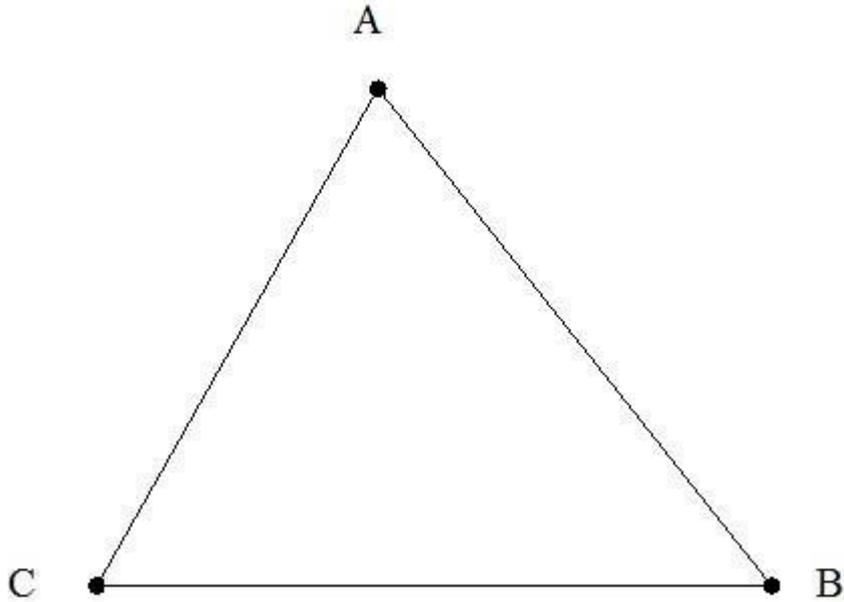


3. Draw the locus of all the points which are equidistant from the lines YW and YX. You must show construction lines.

4. Using line DJ below, construct an equilateral triangle. You must show construction lines



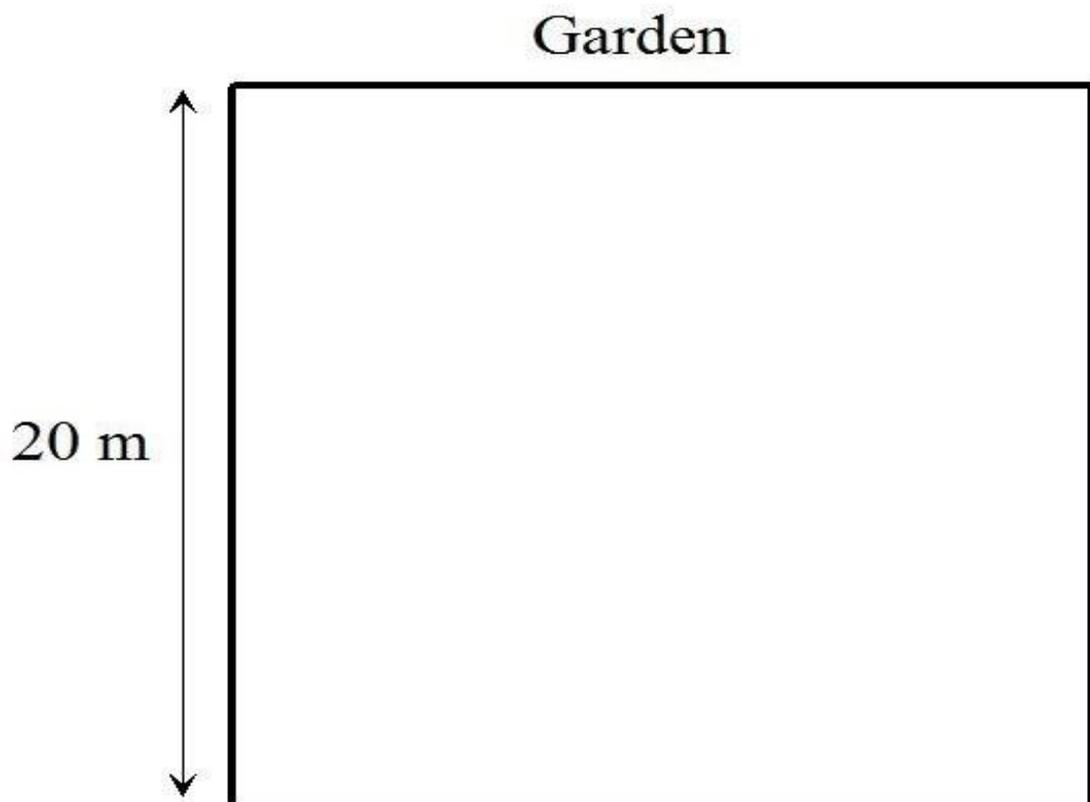
5. ABC is a triangle, label the region R which satisfies both:  
Less than 7 cm from B  
And is closer to line AC than line AB.  
You must show construction lines.



6. Construct a line starting from a point which is perpendicular to line AB. You must show construction lines.



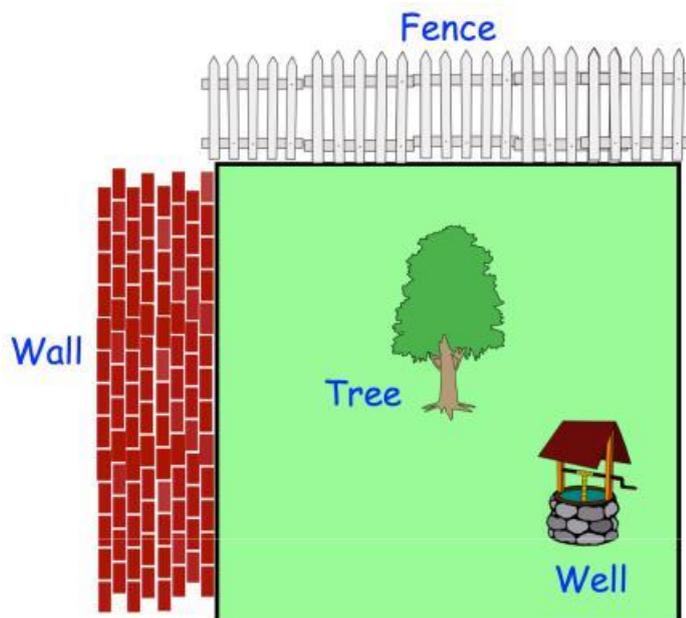
7. The diagram below shows a garden which is 20m by 20m. A dog is tied up in this garden; the length of the dog lead is 5m. Draw the garden and the possible areas the dog can cover if it was to be tied up in any one of the 4 corners and label the region it cannot access as R.



8. The diagram shows Lindsey's garden. Lindsey is deciding where to place a bench

Show the possible positions of the bench for each rule below

- (a) The bench is 1 metre away from the wall.
- (b) The bench is less than 2 metres away from the fence.
- (c) The bench is 2 metres away from the tree.
- (d) The bench is less than 2.5 metres away from the tree.
- (e) The bench is an equal distance (equidistant) from the tree and the well.
- (f) The bench is closer to the well than the tree.
- (g) The bench is an equal distance from the wall and the fence
- (h) The bench is closer to the wall than the fence.
- (i) The bench is less than 2 metres from the wall **and** less than 3 metres from the tree
- (j) The bench is closer to the fence than the wall **and** more than 1 metre from the wall.

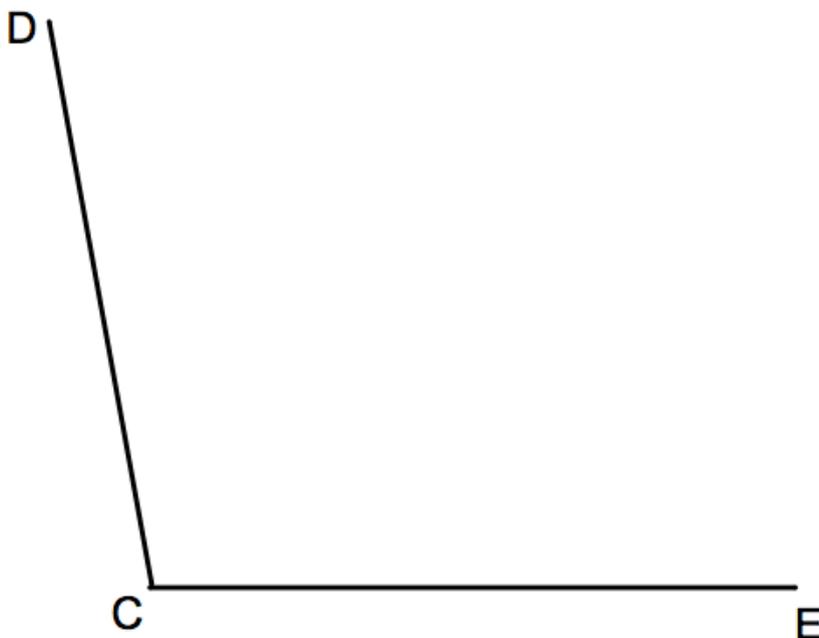


9. Draw the locus of all points which are equidistant from points A and B.

A  
x

B  
x

10. Draw the locus of all points which are equidistant from lines CD and CE.



11.

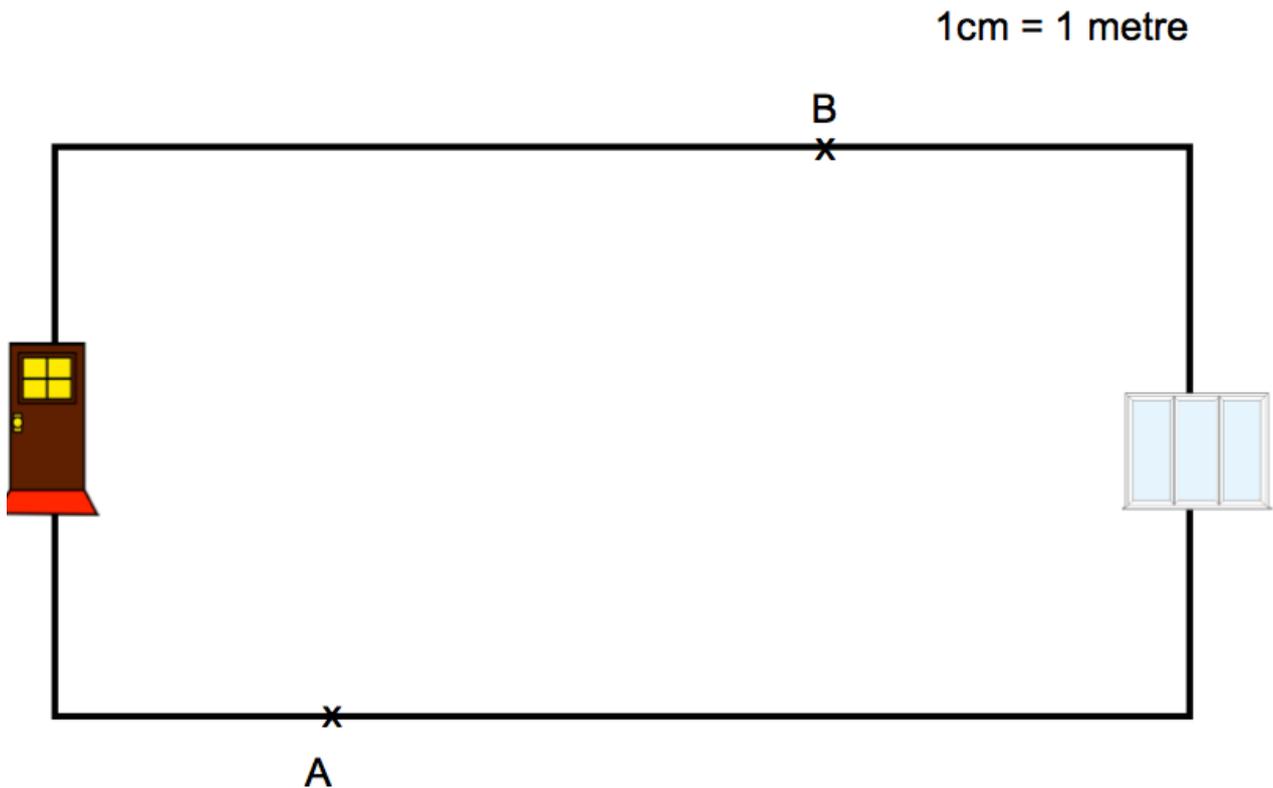


**Draw the locus of all points 3cm from the line**

12 .Below is a diagram of a hall.

**There is a front door at one end of the hall and a patio door at the other.  
There are two burglar alarm sensors, one at A and one at B.**

**The range of each sensor is 4m.**



**The alarm is switched on.**

**Is it possible to walk from the front door to the patio door without setting off the alarm?**

