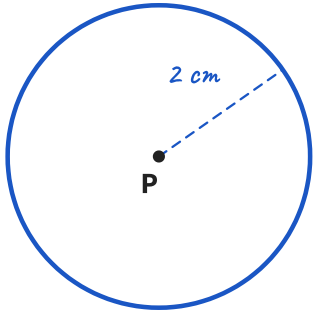
Loci

ANSWERS

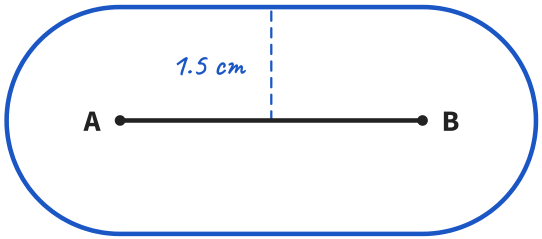
1 A circle, centre P, radius 2 cm.

Draw the locus of points that are 2 cm from P.



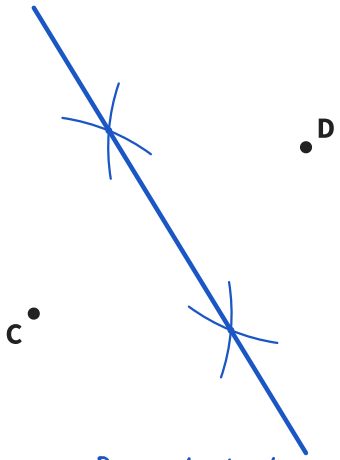
2 Two lines 1.5 cm away, then a semicircle round each end.

Draw the locus of points that are 1.5 cm from the line segment AB.



3

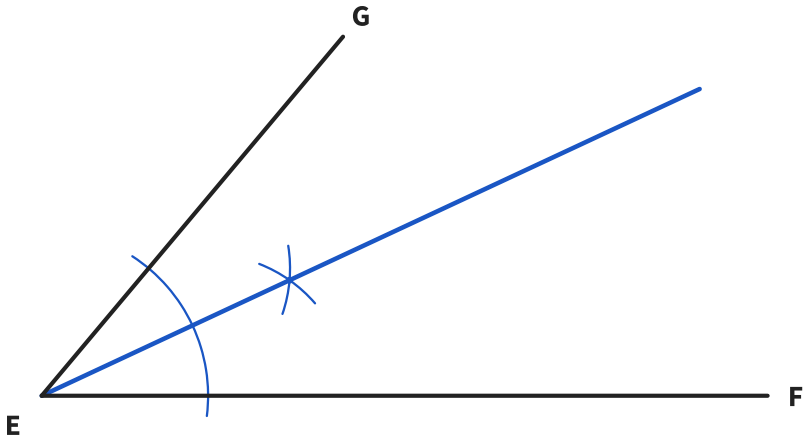
Draw the locus of points that are the same distance from C as from D.



Construction = Perpendicular bisector of CD

4

Draw the locus of points that are the same distance from the line EF as from the line EG.



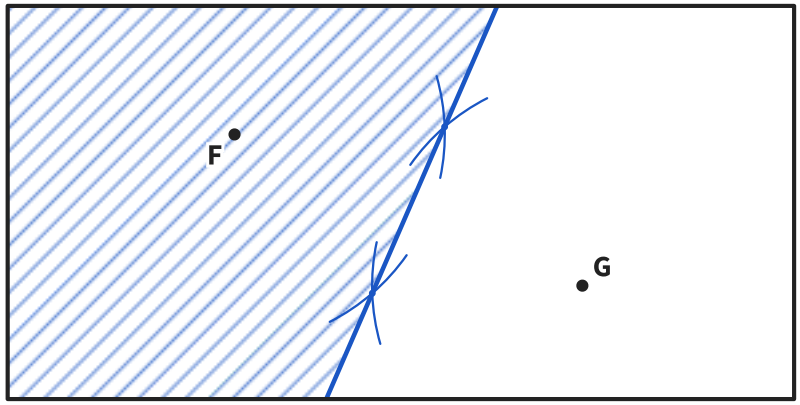
Construction = Angle bisector of angle FEG

Loci

ANSWERS

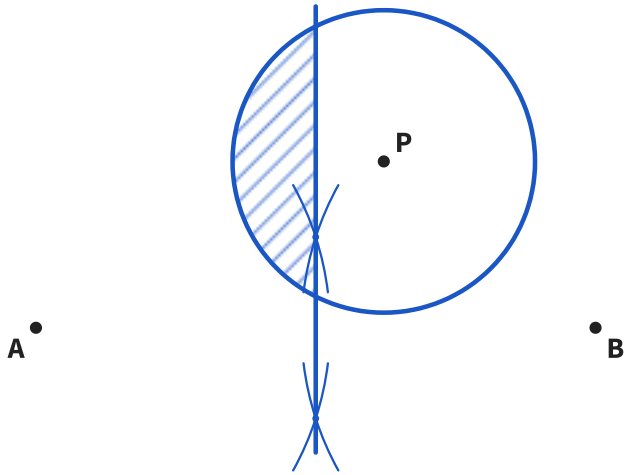
5 *Notice the change!*

Shade the points inside the rectangle that are closer to F than to G.



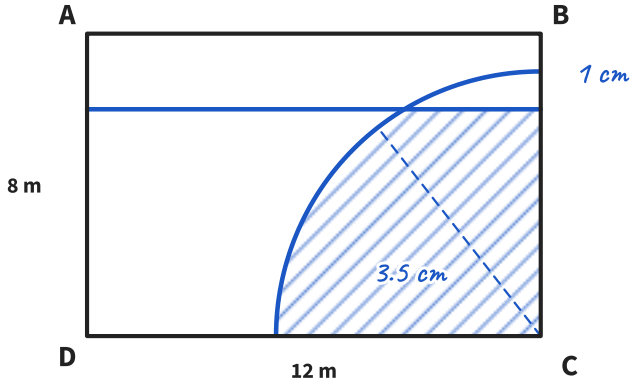
6

Shade the points that are less than 2 cm from P and closer to A than to B.



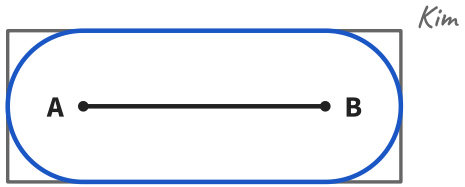
7

A garden is 12 m by 8 m. A pond must be more than 2 m from the wall AB and less than 7 m from the corner C. Shade where it can go.
Scale: 1 cm represents 2 m



8

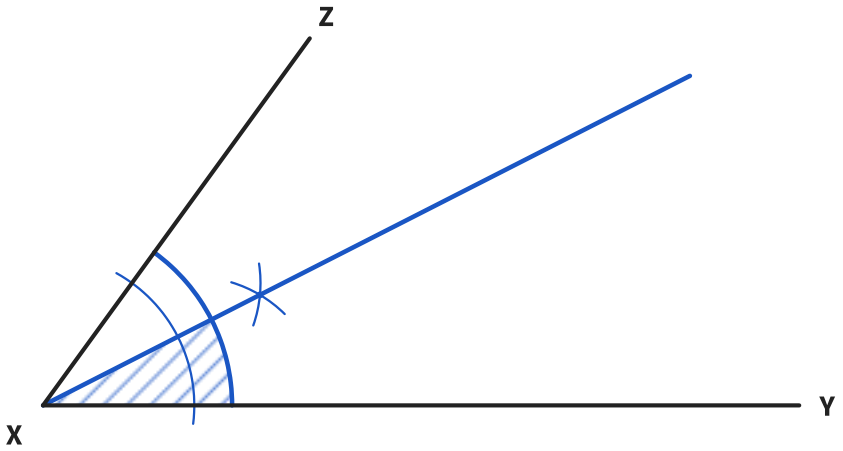
Kim drew the locus of points 1 cm from the line segment AB. Explain her mistake, then draw the locus correctly.



Answer *Her corners are more than 1 cm from A and B. The ends should be semicircles.*

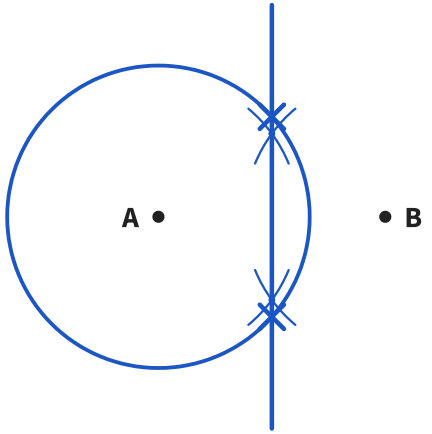
9

Shade the points inside angle YXZ that are nearer to XY than to XZ and less than 2.5 cm from X.



10

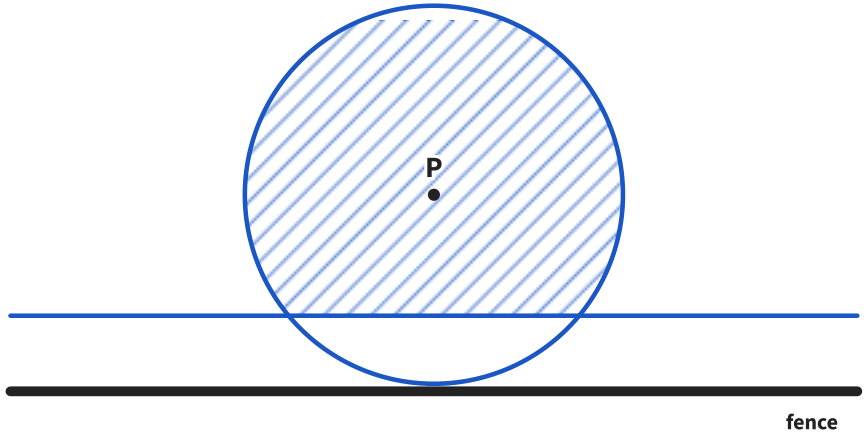
Mark the points that are exactly 2 cm from A and the same distance from A and B. How many are there?



Number of points = 2

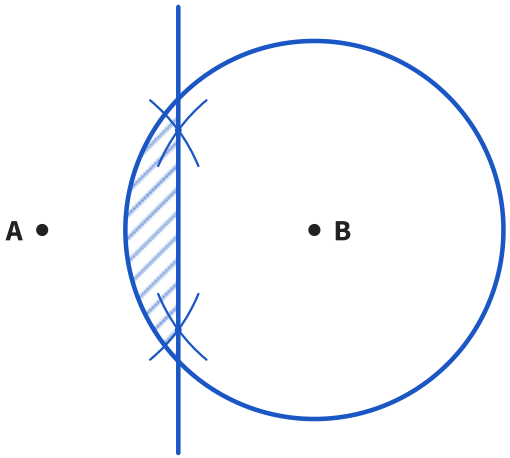
11

A goat is tied to a post P with a 5 m rope. It must stay more than 2 m from the fence. Shade where it can graze.
Scale: 1 cm represents 2 m



12

Lily goes to whichever school, A or B, is closer to home. She goes to school A and lives less than 5 km from school B. Shade where she could live.
Scale: 1 cm represents 2 km



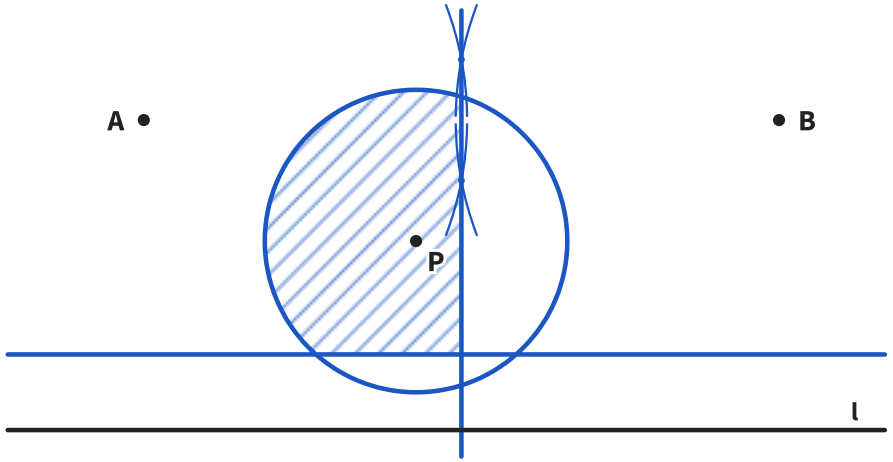
13

A light lights up everything less than 2 m from the straight path AB. Shade the part that is lit.
Scale: 1 cm represents 2 m



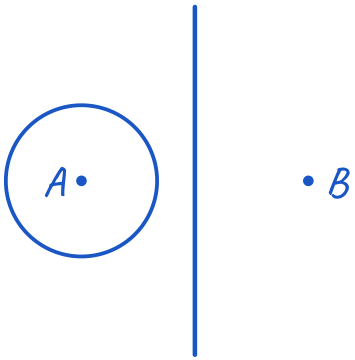
14

Shade the points less than 2 cm from P, more than 1 cm from the line *l* and closer to A than to B.



15

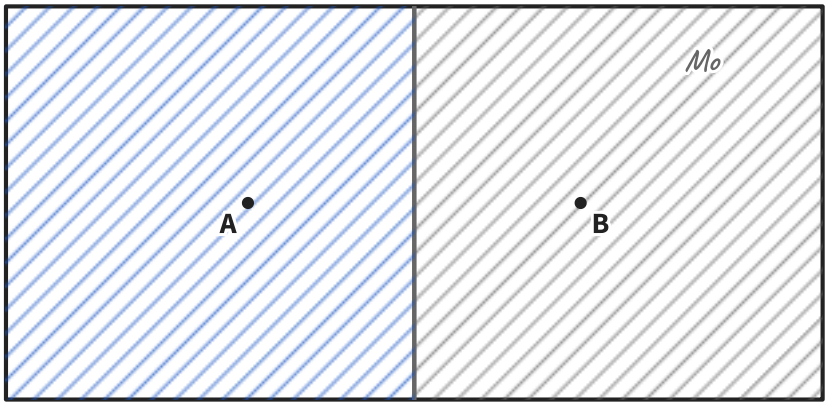
A and B are 3 cm apart. Is there a point that is exactly 1 cm from A and the same distance from A and B? Explain.



Answer *No. Those points are on the perpendicular bisector, 1.5 cm from A, and 1 cm is less than 1.5 cm.*

16

Mo shaded the points closer to A than to B. Is she right? How can you check which side to shade?



Answer *No. A itself is closer to A, so shade the side with A in it.*