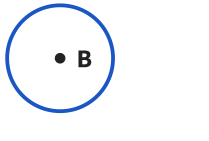
Loci: choosing the construction

ANSWERS

1 From what? Tick one.

A lifeboat must stay exactly 50 m from the buoy B.



Rule exactly 50 m from the buoy B

From ☑ a point ☐ a line ☐ two points ☐ two lines

Construction A circle, centre B

2

A post box is the same distance from the houses H and K.



Rule the same distance from H and K

From ☐ a point ☐ a line ☑ two points ☐ two lines

Construction Perpendicular bisector of HK

3

A rope goes round a straight bench PQ, exactly 1 m from it all the way round.



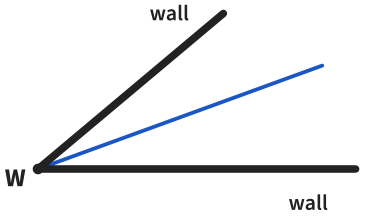
Rule exactly 1 m from the bench PQ

From ☐ a point ☑ a line ☐ two points ☐ two lines

Construction Parallel lines with round ends

4

A statue stands the same distance from the two straight walls that meet at the corner W.



Rule the same distance from the two walls

From ☐ a point ☐ a line ☐ two points ☑ two lines

Construction Angle bisector at W

5 Notice the change!

A bench is less than 8 m from the tap T, and closer to the swings S than to the slide D. Name both constructions.

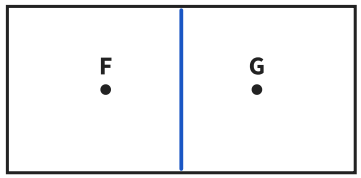


Rule 1 less than 8 m from T: a circle, shade inside

Rule 2 closer to S than D: perpendicular bisector, S's side

6

Fire station F covers every home closer to F than to fire station G.
Name the construction. Which side do you shade?

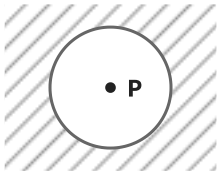


Construction Perpendicular bisector of FG

Shade The side with F in it

7

An alarm sounds if anyone is within 3 m of the painting P. Ola draws a circle round P and shades outside it. What has she done wrong?

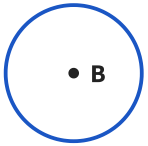


Ola

Answer Within means less than 3 m: shade inside

8

The school bell B can be heard up to 9 m away. Scale: 1 cm represents 2 m.
Name the construction. What width do you set the compasses to?



Construction A circle, centre B

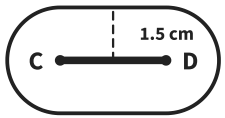
Compasses 4.5 cm

Loci: choosing the construction *further practice*

ANSWERS

9

Write the rule this locus shows.



Rule *Exactly 1.5 cm from the line segment CD*

10

A boat sails a course that is equidistant from the two rocks M and N.
What does equidistant mean?
Which construction?

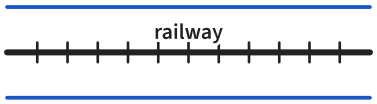


Meaning *The same distance*

Construction *Perpendicular bisector of MN*

11

A drone flies exactly 10 m from a long straight railway that goes on in both directions. What shape is its locus?



Shape *Two parallel lines, 10 m either side, no ends*

12

A camera must be more than 4 m from the door D. Scale: 1 cm represents 2 m.
Name the construction.
Where do you shade?

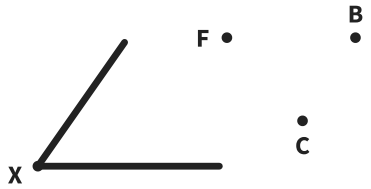


Construction *A circle, centre D, radius 2 cm*

Shade *Outside the circle*

13

A food van must be within 5 m of the fountain F, closer to the car park C than to the bus stop B, and the same distance from two paths that meet at X.
Name the three constructions.



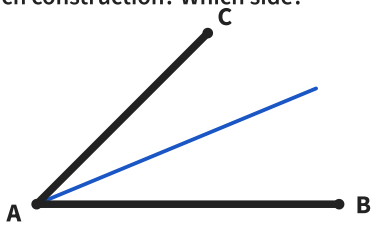
1 *A circle, centre F (inside)*

2 *Perpendicular bisector of CB (C's side)*

3 *Angle bisector at X*

14

Two straight hedges AB and AC meet at A.
Zara wants the points inside the angle that are closer to AB than to AC.
Which construction? Which side?



Construction *Angle bisector of angle BAC*

Side *The side with AB in it*

15

Nobody may stand within 3 m of a straight conveyor belt PQ. Scale: 1 cm represents 2 m. Name the construction.
How far from PQ do you draw it?



Construction *Parallel lines with round ends*

Distance *1.5 cm from PQ*

16

Leo says "closer to A than to B" and "the same distance from A and B" need different constructions.
Is he right? Explain.

Answer *No. Both use the perpendicular bisector of AB.*

The same distance is on it. Closer to A is A's side.