

1 Perpendicular bisector

- a) Construct the perpendicular bisector of AB. Leave your arcs.
- b) Your line crosses AB at M. Measure AM.

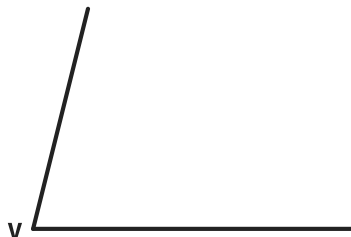


a) arcs from A and B, the same radius

b) $AM = 2.3 \text{ cm}$, half of AB

2 Angle bisector

- Angle V is 76° .
- a) Construct the bisector of angle V. Leave your arcs.
- b) Now bisect one of your two angles. What size are the smallest angles?



a) two angles of 38°

b) $38 \div 2 = 19^\circ$

3 Perpendicular through a point

P is a house. AB is a road.
1 cm represents 50 m.

X P

- a) Construct the perpendicular from P to AB.
- b) How far is the house from the road?

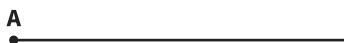


a) arcs from P cut AB twice, then bisect

b) $1.8 \text{ cm} \times 50 = 90 \text{ m}$

4 Constructing triangles

- a) Construct triangle ABC with $AB = 3 \text{ cm}$, $AC = 2.5 \text{ cm}$ and $BC = 2 \text{ cm}$. Leave your arcs.
- b) Measure angle ABC.



a) AB, then arcs of 2.5 cm from A and 2 cm from B

b) 56° (54° to 58°)

Constructions and loci

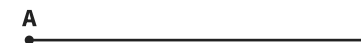
revision mat answers

Foundation A

5 Constructing triangles

A is marked on the line.
 $AB = 3 \text{ cm}$, angle A is 35° and angle B is 60° .

- a) Draw triangle ABC accurately.
- b) Measure AC.



a) AB, then 35° at A and 60° at B meet at C

b) $AC = 2.6 \text{ cm}$ (2.5 to 2.7 cm)

6 Loci: a fixed distance

A sprinkler on the rail AB waters everything within 2 m of the rail.
1 cm represents 2 m.



- a) Draw the edge of the watered region.
- b) Is the plant at C watered? Explain.

X C

a) lines 1 cm each side, semicircles at A and B

b) No: C is 1.5 cm (3 m) from A

7 Loci: equal distances

- a) Construct the locus of points the same distance from P and Q. Leave your arcs.
- b) Mark the two points on your line that are 2.5 cm from P.

X P

X Q

a) the perpendicular bisector of PQ

b) 1.5 cm above and below the middle of PQ

8 Loci: regions

- a) Draw the line inside field ABCD that is 2 m from AB.
- b) A tent must be more than 2 m from AB and nearer D than C. Shade where it can go.



1 cm represents 2 m

a) a line 1 cm above AB

b) above it, left of the middle of DC