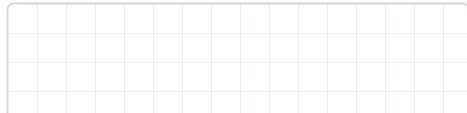
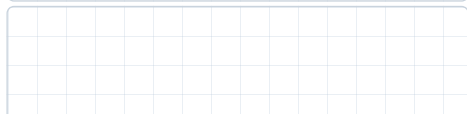
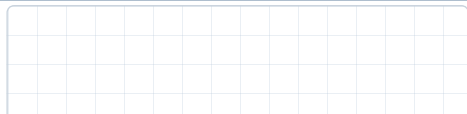


CONSTRUCT SIDES 5 CM, 7 CM, 6 CM

- 1 Draw a straight base exactly 7 cm long with the ruler.
- 2 Set the compass to 5 cm and swing a light arc from the left end of the base.
- 3 Set the compass to 6 cm and swing a light arc from the right end of the base.
- 4 Mark the point where the two arcs cross; that is the third vertex.
- 5 Join the third vertex to each end of the base with the ruler to finish the triangle.

PRACTICE

- 1 You are making a small triangular brace for a model shelf. Cut and join sides that measure exactly **4 cm**, **5 cm** and **6 cm**. 
- 2 A toy roof truss needs three struts of **9 cm**, **11 cm** and **13 cm**. Build the triangle so every strut fits without gaps. 
- 3 You are marking the centre line of a **70°** corner joint on a wooden frame. Bisect the angle so each half is equal.
Bisect a 70° angle.

- 4 A garden trellis panel must be a triangle with sides **12 cm**, **16 cm** and **20 cm**. Construct it exactly with compass and ruler only. 
- 5 While building a bird-house gable you start with a **14 cm** base board. Swing the **15 cm** and **17 cm** arcs to locate the peak joint.

Draw a 14 cm base, swing a 15 cm arc from one end and a 17 cm arc from the other, then mark the third vertex.

- 6 You need a centred triangular support under an **8 cm** shelf. First bisect the **8 cm** line, then build an equilateral triangle on one half.
Bisect a straight line 8 cm long and then construct an equilateral triangle on one of the halves.

? ALWAYS, SOMETIMES, NEVER

Always, sometimes or never true? Write A, S or N.

- | | |
|--|--|
| a. A triangle with sides 5 cm, 7 cm and 6 cm can be drawn exactly by swinging two arcs from the ends of the longest side. ☐ | c. A protractor is required to construct a triangle when only the three side lengths are given. ☐ |
| b. Bisecting a 70° angle produces two angles of 35° each. ☐ | d. Three lengths you choose will make a triangle. ☐ |