

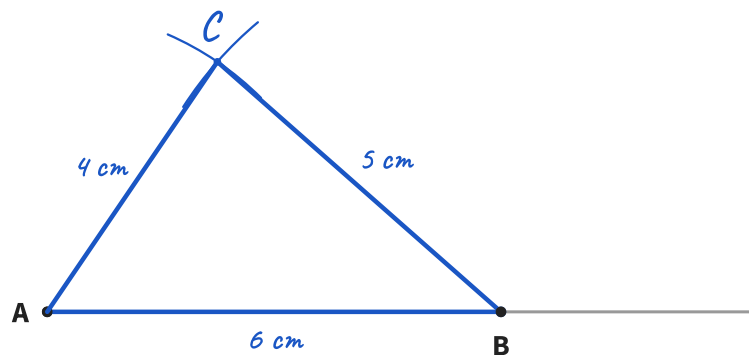
Constructing Triangles

ANSWERS

1

Open the compasses to the length of the side.

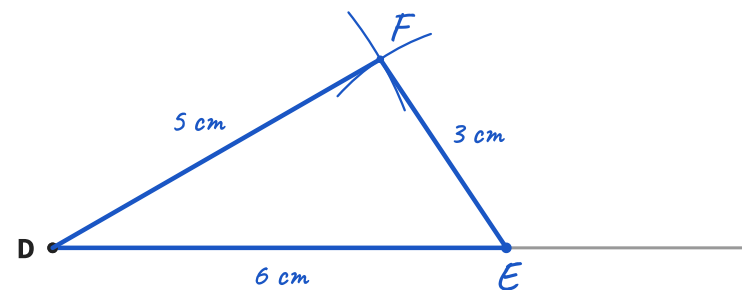
Construct triangle ABC with $AB = 6\text{ cm}$, $AC = 4\text{ cm}$ and $BC = 5\text{ cm}$.
Leave your arcs showing.



2

Measure DE along the line first.

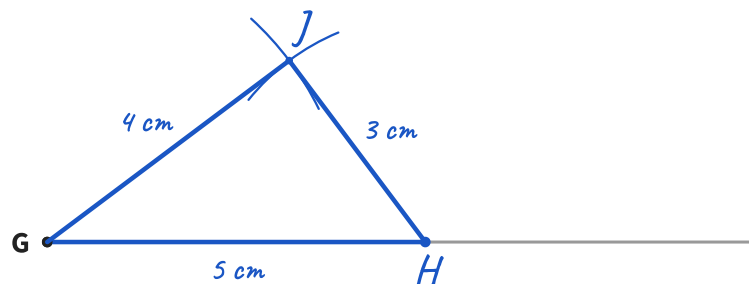
Construct triangle DEF with $DE = 6\text{ cm}$, $DF = 5\text{ cm}$ and $EF = 3\text{ cm}$.
Leave your arcs showing.



3

Measure GH along the line first.

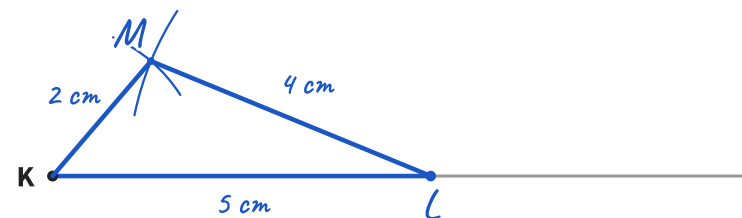
Construct triangle GHJ with $GH = 5\text{ cm}$, $GJ = 4\text{ cm}$ and $HJ = 3\text{ cm}$.
Leave your arcs showing.



4

Measure KL along the line first.

Construct triangle KLM with $KL = 5\text{ cm}$, $KM = 2\text{ cm}$ and $LM = 4\text{ cm}$.
Leave your arcs showing.

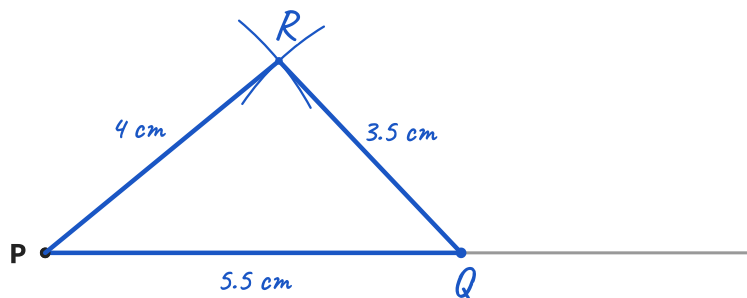


Constructing Triangles

ANSWERS

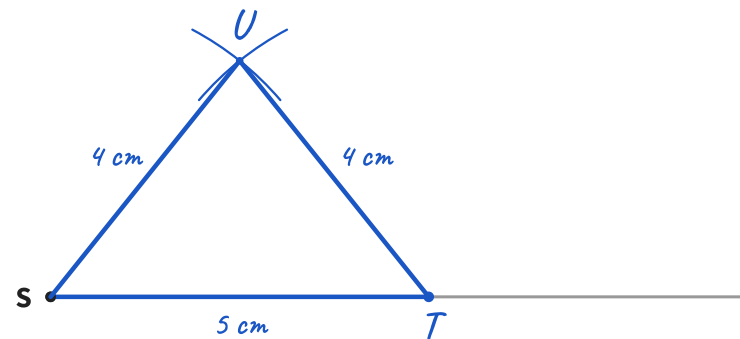
5

Construct triangle PQR with $PQ = 5.5$ cm, $PR = 4$ cm and $QR = 3.5$ cm.
Leave your arcs showing.



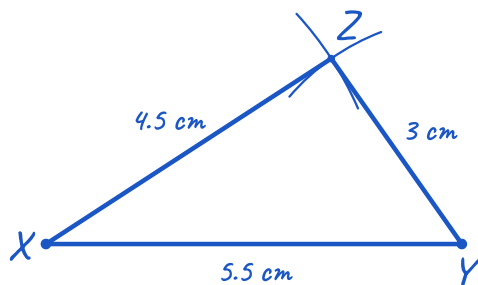
6

Construct triangle STU with $ST = 5$ cm, $SU = 4$ cm and $TU = 4$ cm.
Leave your arcs showing.



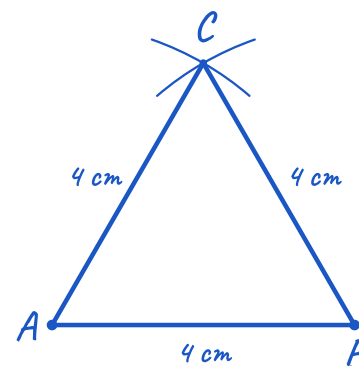
7

Construct triangle XYZ with $XY = 5.5$ cm, $XZ = 4.5$ cm and $YZ = 3$ cm.
Leave your arcs showing.



8

Construct an equilateral triangle ABC with sides of 4 cm.
Leave your arcs showing.

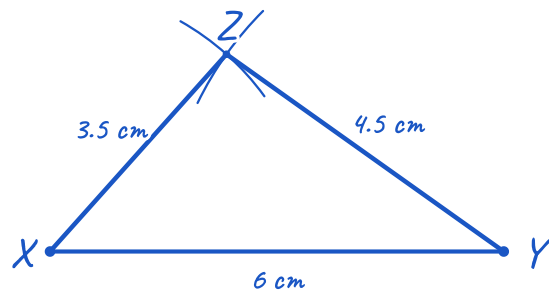


Constructing Triangles *further practice*

ANSWERS

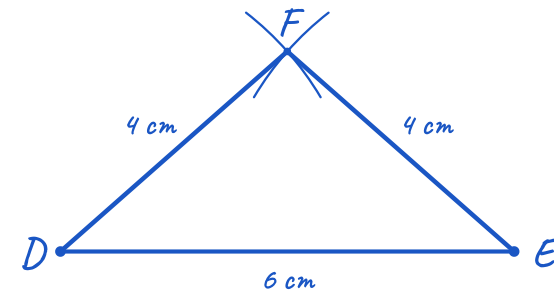
9

Construct triangle XYZ with $XY = 6$ cm, $XZ = 3.5$ cm and $YZ = 4.5$ cm. Leave your arcs showing.



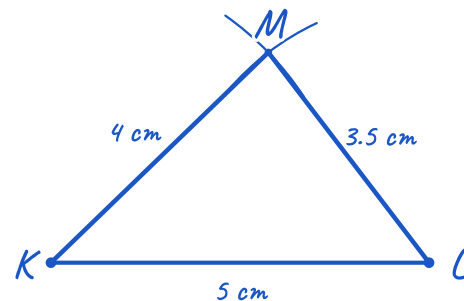
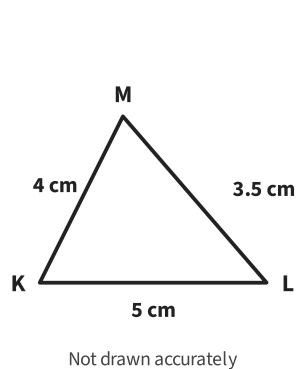
10

Triangle DEF is isosceles with $DE = 6$ cm. Its two equal sides, DF and EF, are 4 cm each. Construct triangle DEF.



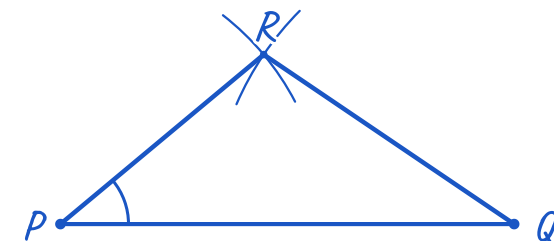
11

Here is a sketch of triangle KLM. Construct it accurately. Leave your arcs showing.



12

Construct triangle PQR with $PQ = 6$ cm, $PR = 3.5$ cm and $QR = 4$ cm. Then measure angle QPR.



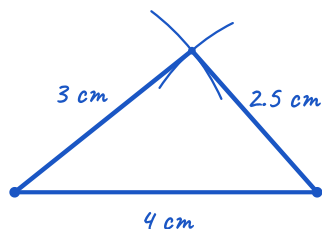
Angle QPR = 40° (accept 38° to 42°)

Constructing Triangles *further practice*

ANSWERS

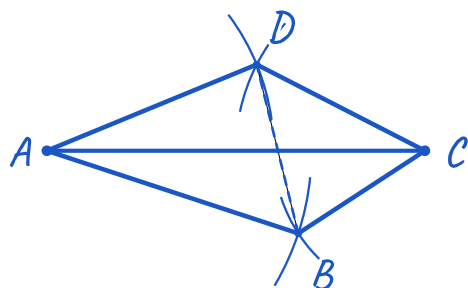
13

A triangular flower bed has sides of 16 m, 12 m and 10 m. Make an accurate scale drawing of it. Scale: 1 cm represents 4 m.



15

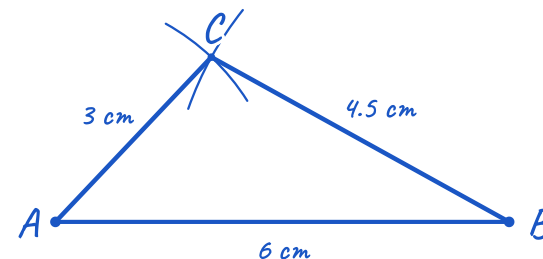
A field ABCD is split into two triangles by a straight path AC. AB = 70 m, BC = 40 m, CD = 50 m, DA = 60 m and AC = 100 m. Make a scale drawing. Scale: 1 cm represents 20 m. About how long is BD?



BD = about 46 m (accept 42 to 50 m)

14

Triangle ABC has a perimeter of 13.5 cm. AB = 6 cm and AC = 3 cm. Construct triangle ABC.

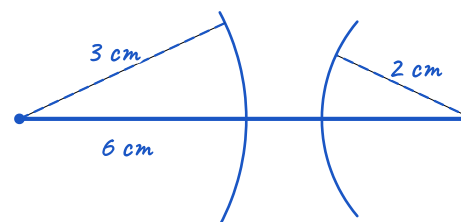


Answer

$$BC = 13.5 - 6 - 3 = 4.5 \text{ cm}$$

16

Ella tries to construct a triangle with sides of 6 cm, 3 cm and 2 cm. Try it. Explain what happens and why.



Answer The arcs do not meet, because $3 + 2 = 5$, which is shorter than 6 cm.