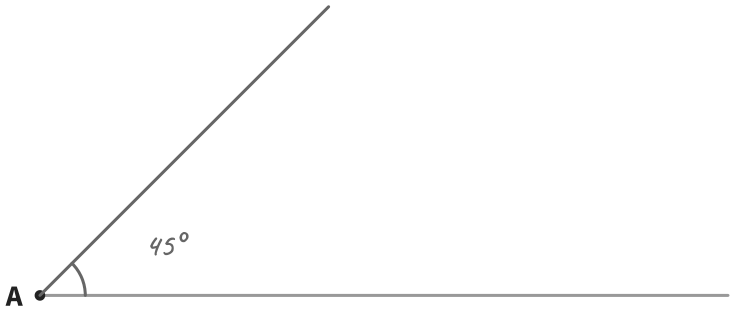
Constructing triangles with angles

1 The angle line is drawn. Measure AB along the guide line.

Construct triangle ABC with AB = 5.5 cm, angle A = 45° and AC = 4 cm.



2 Base, angle, long line, measure, join.

Construct triangle DEF with DE = 5 cm, angle D = 60° and DF = 3.5 cm.



3 *Notice the change!*

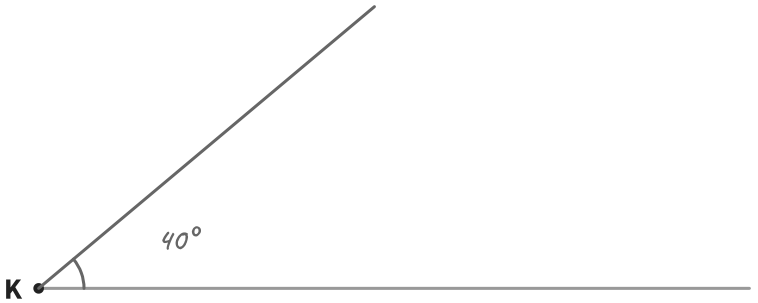
Construct triangle GHJ with GH = 4.5 cm, angle G = 120° and GJ = 3 cm.
Then measure HJ.



HJ = _____

4 *Notice the change!* The first angle line is drawn.

Construct triangle KLM with KL = 5 cm, angle K = 40° and angle L = 60°.
Then measure KM.



KM = _____

Constructing triangles with angles

5

Construct triangle STU with ST = 5.5 cm, angle S = 35° and angle T = 60°.
Then measure SU. Check: angle U should be 85°.

S •

SU = _____

6 *Notice the change!*

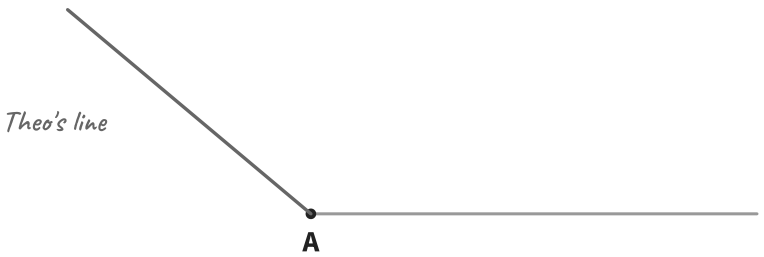
Construct triangle VWX with VW = 5 cm, angle W = 70° and WX = 3 cm.
Then measure VX.

V •

VX = _____

7

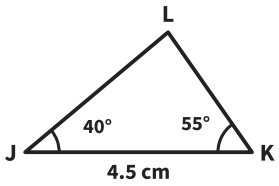
Theo was asked to draw an angle of 40° at A. What angle did he draw?
Explain his mistake, then draw the 40° line.



Answer _____

8

Here is a sketch of triangle JKL. Construct it accurately. Then measure JL.



Not drawn accurately

JL = _____

Constructing triangles with angles *further practice*

9

Construct triangle PQR with PQ = 4.5 cm, angle Q = 70° and QR = 2.5 cm.
Then measure PR.

PR = _____

10

Construct a triangle with a 2.5 cm base and 60° at each end.
Measure the other sides. What type is it?

Answer _____

11

In triangle DEF, DE = 4.5 cm, angle D = 35° and angle F = 80°. Work out angle E, then construct the triangle.

Answer _____

12

A vegetable patch is a triangle. Two of its edges are 5 m and 3 m long, with an angle of 65° between them. Make a scale drawing. How long is the third edge?
Scale: 1 cm represents 1 m

Answer _____

Constructing triangles with angles *further practice*

13

A and B are 40 m apart on a straight path. A drone is at 55° to the path from A and at 40° from B. How far is the drone from A?
Scale: 1 cm represents 10 m

Answer _____

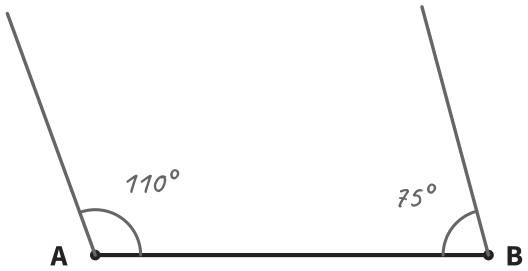
14

Construct triangle ABC with AB = 3.5 cm, angle A = 40° and AC = 3.5 cm.
Measure angles B and C. What do you notice?

Answer _____

15

Ella drew angles of 110° and 75° at the ends of AB. Her lines never meet.
Explain why.



Answer _____

16

Lena knows the three angles of a triangle: 50°, 60° and 70°. Can she construct exactly one triangle? Explain.

Answer _____