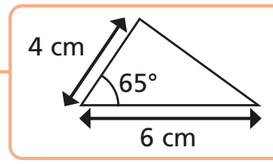
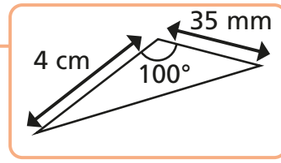
Construct triangles using SSS, SAS and ASA

1 Make accurate drawings of the triangles.

a)



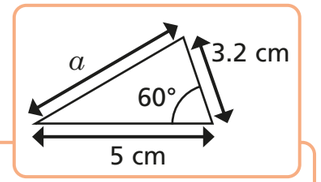
b)



Discuss your method with a partner.

Which side did you draw first?

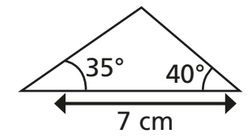
2 By drawing the triangle accurately, find the length of the side marked a.



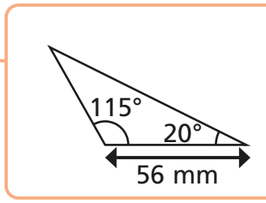
$a =$ 4.8 cm

3 Make accurate drawings of the triangles.

a)



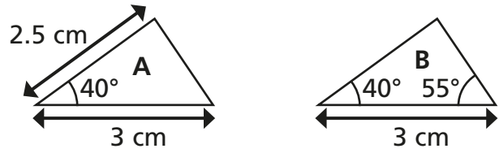
b)



Discuss your method with a partner.

4 Which triangle has the greater perimeter? Tick your answer.

Show all your workings.



5 **a)** Use the information to construct triangle PQR.

angle PQR = 70° PQ = 8 cm QR = 3.2 cm

b) Measure the length of PR.

Give your answer to 1 decimal place.

7.3 cm

6 Describe three different ways to construct an equilateral triangle with a perimeter of 180 mm.

Method 1

SSS - three side lengths of 60 mm (6 cm)

Method 2

SAS - 6 cm side, 60° angle and 6 cm side.

Method 3

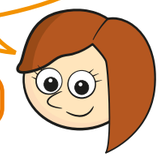
ASA - 60° angle, 6 cm side, 60° angle.

7

There is only one triangle that has side lengths 6 cm, 7.5 cm and 9 cm.

Dexter

There is only one triangle that has angles 70°, 80°, 30°.



Rosie

Are Dexter and Rosie both correct? Discuss with a partner.