Construct triangles using SSS

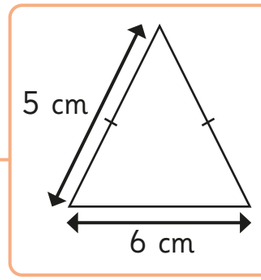
1 Use a ruler and a pair of compasses to construct a triangle with side lengths of 7 cm, 6 cm and 4 cm.

Discuss your method with a partner.

Which side did you draw first?

2 Construct an equilateral triangle with a side length of 5 cm.

3 Eva sketches an isosceles triangle.



a) Make an accurate construction of the triangle.

b) Use the accurate construction to work out the area of the triangle.

Show the steps in your working.

12 cm²

4 Show that a triangle with sides of 3 cm, 4 cm and 5 cm is right-angled.

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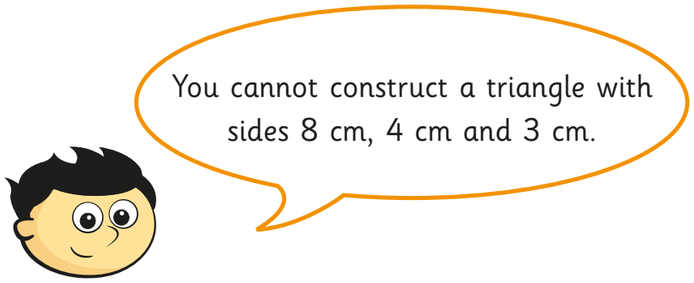
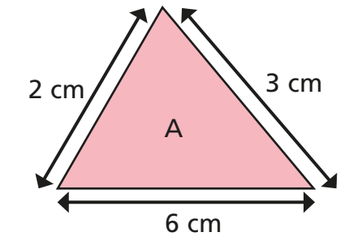


a) Using a ruler and a pair of compasses, show that Jack is correct.

b) Explain why it is not possible to draw this triangle.

3 + 4 < 8

c) Tick the triangles with measurements that are not possible.



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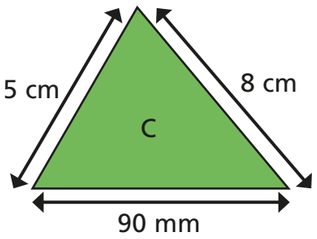

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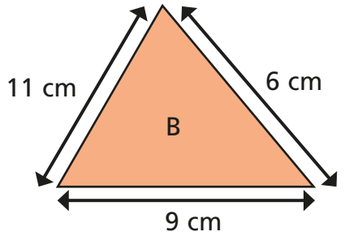

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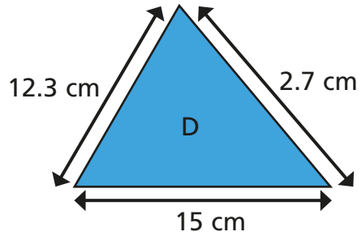

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6 What is the size of the largest angle in a triangle with sides that measure 8 cm, 5.9 cm and 2.4 cm?

114.5°

7 Construct a triangle that has a perimeter of 15 cm.

Compare answers with a partner.

How many different triangles can you find?