Try these triangles: Assessment task

http://topdrawer.aamt.edu.au/Geometric-reasoning/Assessment/Assessment-approaches/Practical-tasks/Try-these-triangles

Triangles may be classified using their sides AND their angles.

This means there are 7 different types of triangles, as seen in the table below.

On the following page, there are 7 different triangles to construct (one of each type). Construct all 7 of them on the following pages, then write the numbers from 1 to 7 in the unshaded boxes in the table below. You must use every number once only.

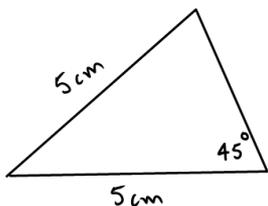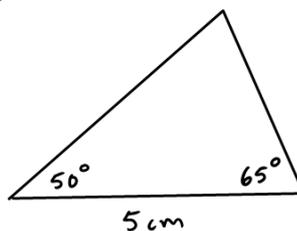|		Classifying triangles using their angles		
		acute-angled triangles contain angles less than 90 degrees each	right-angled triangles contain one 90 degree angle	obtuse-angled triangles contain one angle greater than 90 degrees
Classifying triangles using their sides	equilateral triangles		not possible	not possible
	isosceles triangles			
	scalene triangles			

These triangles have been drawn very badly. Construct them neatly and accurately with your pencil, ruler, compasses and protractor. If you use your compasses, do NOT erase your arcs.
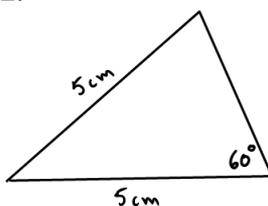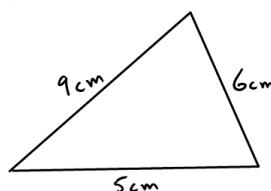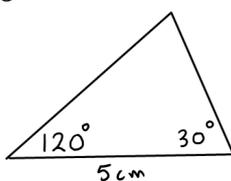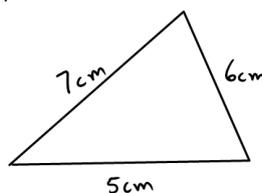
1.

5 cm
45°
5 cm

5.

50°
65°
5 cm

2.

5 cm
60°
5 cm

6.

9 cm
6 cm
5 cm
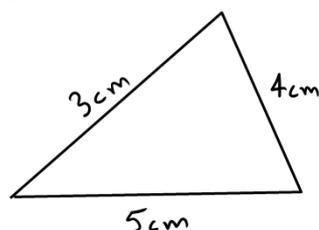
3.

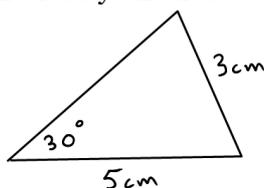

120°
30°
5 cm

7.

7 cm
6 cm
5 cm

4.

3 cm
4 cm
5 cm

Challenge

1. Construct 2 DIFFERENT triangles that possess the following measurements. Do it neatly and accurately with your pencil, ruler, compasses and protractor. If you use your compasses, do NOT erase your arcs.

3 cm
30°
5 cm

2. Explain why it is impossible to construct a triangle with sides 35 cm, 50 cm and 14 cm. You may support your explanation with a scale drawing.