

8300

GCSE MATHEMATICS

Foundation and Higher tier – Questions by Topic

Geometry

Angles – Angles in triangles

v1.0

Name _____

Materials

For this paper you must have:

- Mathematical instruments

Information

- The marks for questions are shown in brackets

Advice

- In all calculations, show clearly how you work out your answer

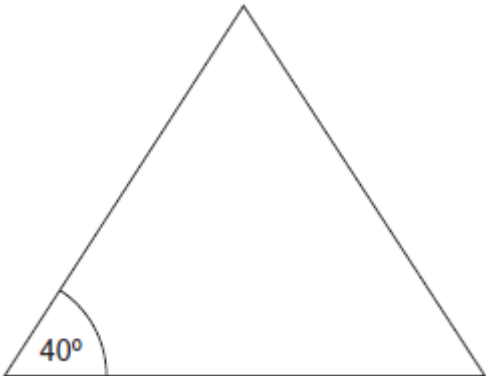
For question 1, you must **NOT** use a calculator.



Q1.

The diagram shows an **isosceles** triangle.

Not drawn accurately



Work out the possible **sizes** of the other **two** angles.
Give both **different** pairs of answers.

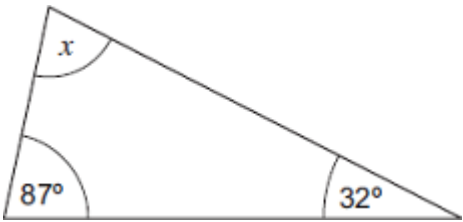
(Total 3 marks)

For questions 2 to 7, you may use a calculator.



Q2.

Work out the value of x .



Not drawn accurately

(Total 2 marks)

Q3.

In a triangle, two of the angles are 51° and 74° .
Work out the size of the third angle.

(Total 1 mark)

Q4.

One of the angles in a triangle is 60°
Tick a box for each statement.

	Must be true	Cannot be true	Might be true
The triangle is equilateral			
The triangle has at least one other acute angle			
The triangle is right-angled			
The other two angles are each less than 60°			

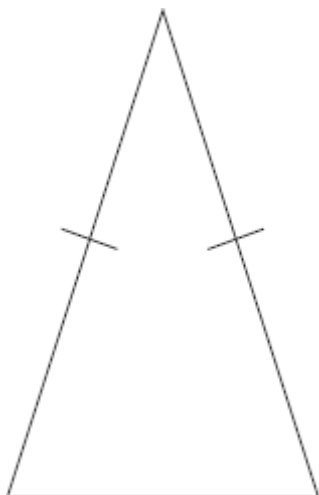
(Total 4 marks)

Q5.

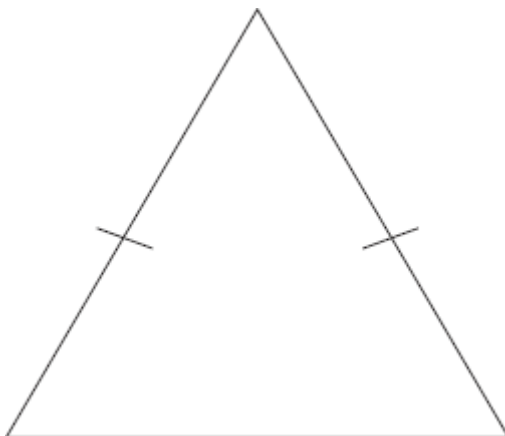
An angle in an isosceles triangle is 74°

Fill in three angles on each triangle below to show the **two** possible isosceles triangles.

Not drawn accurately



Not drawn accurately

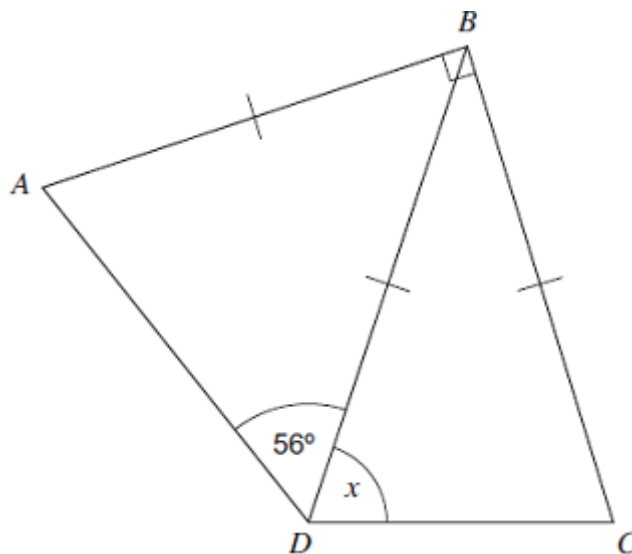


(Total 3 marks)

Q6.

Triangles ABD and BCD are isosceles.
Angle ABC is 90°

Not drawn
accurately



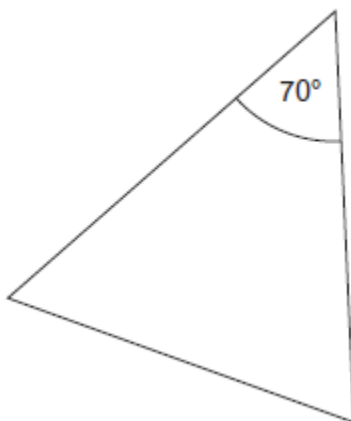
Work out the size of angle x .

(Total 4 marks)

Q7.

This triangle is isosceles.

Not drawn accurately



Work out the angles of the **two** possible triangles.

(Total 3 marks)

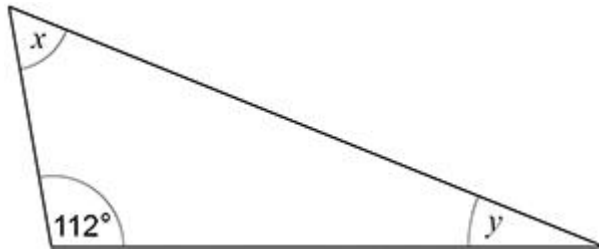
Angles – Angles in triangles – Cross topic questions.

For question 8 and 9, you must **NOT** use a calculator.



Q8.

Here is a triangle.



Not drawn accurately

$$x = 3y$$

Work out the size of angle y .

(Total 3 marks)

Q9.

In a **right-angled** triangle

smallest angle : largest angle = 2 : 5

Work out the three angles of the triangle.

(Total 4 marks)

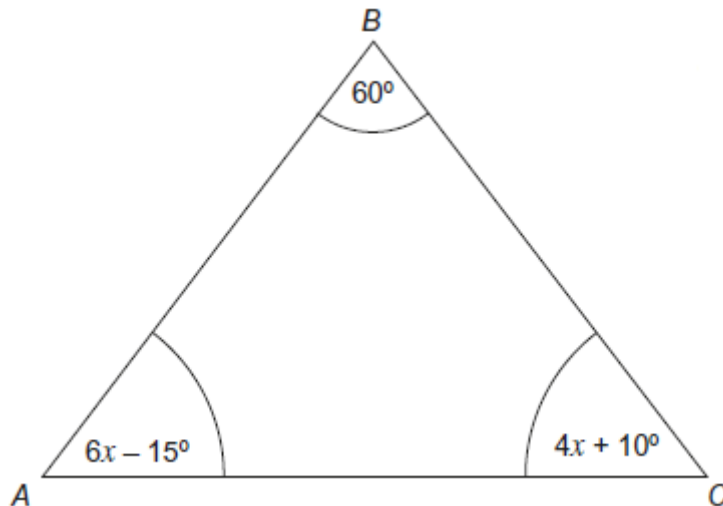
For question 10, you may use a calculator.



Q10.

Show that ABC is an equilateral triangle.

Not drawn accurately



(Total 5 marks)