Bishops Online Tutoring

Education Consultancy

Edexcel GCSE Mathematics
LOCI & CONSTRUCTIONS

Materials Required:

- Pen
- HB Pencil
- Ruler (in centimetres and millimetres)
- Protractor
- Compass

Instructions:

- Use a black ink pen to answer all questions
- Fill your name in the section below
- Answer the questions in the spaces provided
- Show your working out for all answers

Information:

- The marks allocated for each question are displayed within brackets – utilise this information to gauge the appropriate amount of time to dedicate to each question
- Questions marked with an asterisk (*) will assess your written communication; be careful of spelling, punctuation and grammar with these questions

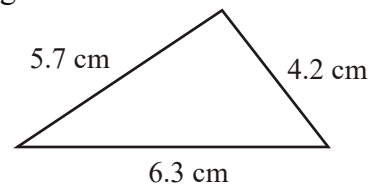
Advice:

- Carefully read the question before attempting to answer it
- Be vary of time and try to answer every question
- If you have enough time in the end, go back and check your answers. A good way to check your answers is to retry the question with the hope of getting the same answer as before without looking at your working out from before

NO CALCULATOR ALLOWED

NAME:	

1. Here is a sketch of a triangle.



In the space below, use ruler and compasses to **construct** this triangle accurately.
You must show all construction lines.

(3 marks)

2.

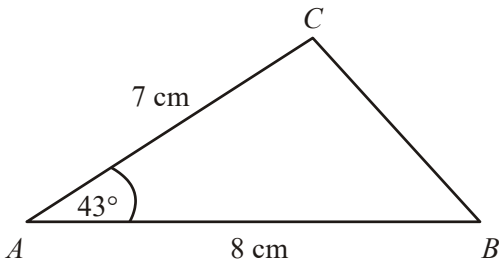


Diagram **NOT** accurately drawn

ABC is a triangle.
AB = 8 cm.
AC = 1 cm.
Angle *A* = 43°.

In the space below, make an accurate drawing of triangle *ABC*.

(3 marks)

3. The diagram shows a sketch of triangle *ABC*.

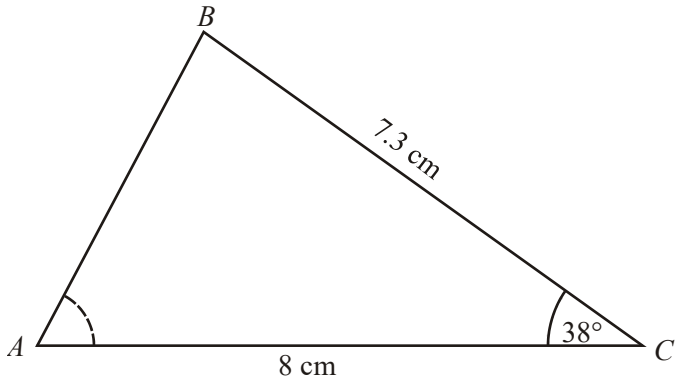


Diagram **NOT** accurately drawn

BC = 7.3 cm.
AC = 8 cm.
Angle *C* = 38°.

(a) Make an accurate drawing of triangle *ABC*.

(3)

(b) Measure the size of angle *A* on your diagram.

.....°

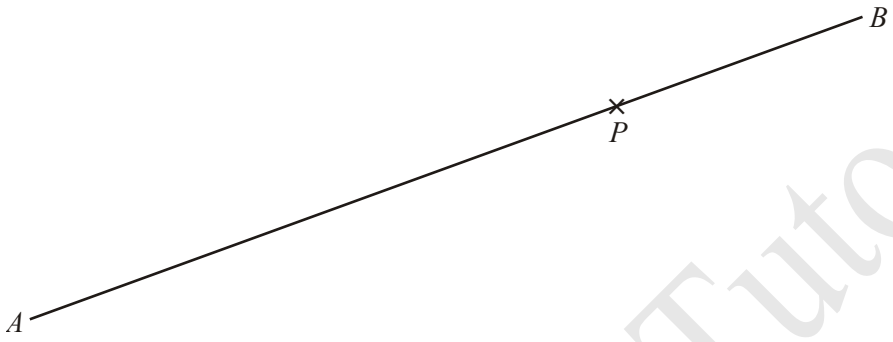
(1)

(4 marks)

4. In the space below, use ruler and compasses to **construct** an equilateral triangle with sides of length 6 centimetres.
You must show all your construction lines.

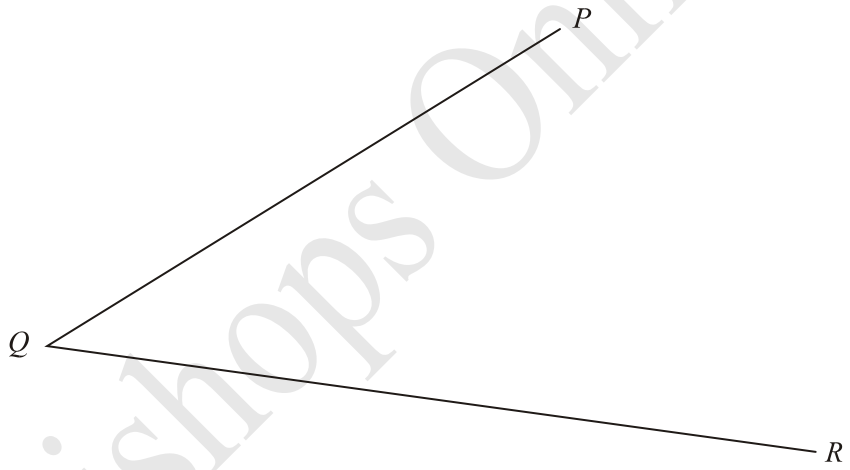
(3 marks)

5. Use the ruler and compasses to **construct** the perpendicular to the line segment AB that passes through the point P.
You must show all construction lines.



(3 marks)

6.



Use ruler and compasses to **construct** the bisector of angle PQR.
You must show all your construction lines.

(3 marks)

7.

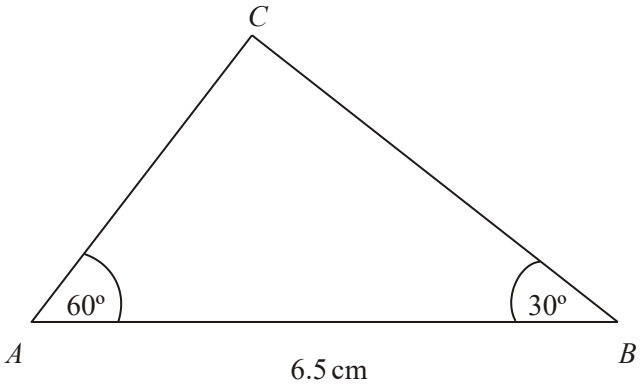


Diagram **NOT** accurately drawn

(a) Make an accurate drawing of triangle *ABC*.

(3)

(b) Measure the size of the angle at *C* in your triangle.

.....°

(1)

(4 marks)

8.

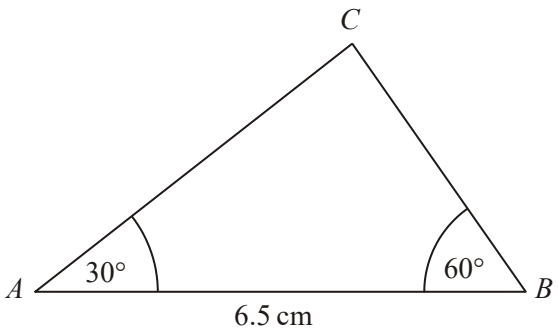


Diagram **NOT** accurately drawn

(a) Make an accurate drawing of this triangle.

(2)

(b) Measure the length of the line AC on your drawing. You must state the units.

……...

(2)

The size of the angle in the triangle at C is 90°.

(c) Write down the mathematical name for this type of angle.

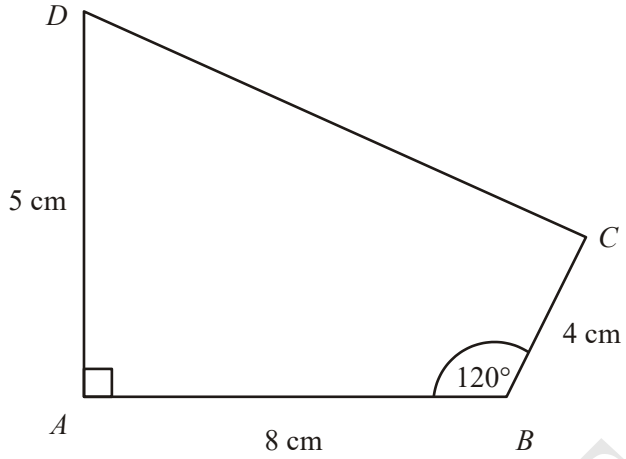
……...

(1)

(5 marks)

9.

Diagram **NOT** accurately drawn

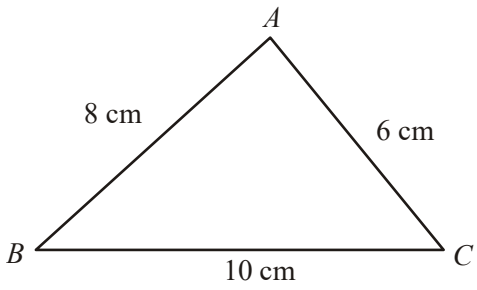


Make an accurate drawing of the quadrilateral *ABCD* in the space below.

(4 marks)

10.

Diagram **NOT** accurately drawn



ABC is a triangle.
AB = 8 cm.
AC = 6 cm. *BC* = 10 cm.

Use ruler and compasses to construct an accurate drawing of triangle *ABC*.

You must show all your construction lines.

(3 marks)

11. Here is a sketch of a rhombus.

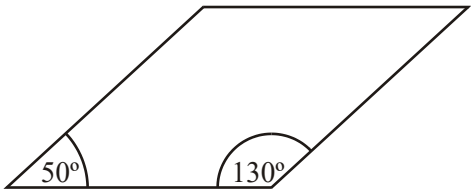


Diagram **NOT** accurately drawn

The rhombus has a side of length 6 cm.
One angle of the rhombus is 50°.
Another angle of the rhombus is 130°.

Use a ruler and a protractor to make an accurate drawing of the rhombus.

(4 marks)