Surname	
Other Names	
Candidate's Signature	

GCSE 9 - 1 Questions

Construction 1

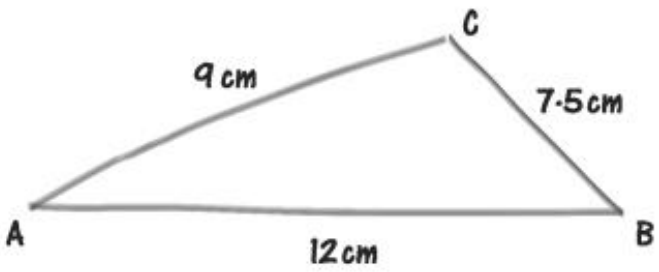
Calculator Allowed

INSTRUCTIONS TO CANDIDATES

- Write your name in the space provided.
- Write your answers in the spaces provided in this question paper.
- Answer ALL questions.
- Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.
- You should have a ruler, compass and protractor where required.

Total Marks :

1) The diagram below shows a freehand sketch of a triangle *ABC* that is not drawn to scale.



Use a ruler and a pair of compasses to draw an accurate diagram of triangle *ABC*.

You must show all your construction arcs. [2]

2) Construct an accurate drawing of the triangle ABC in which AB=11cm, angle BAC=40° and angle ABC = 28°

[3]

3) Using a ruler and a pair of compasses, construct an angle of 30° at the point *A* on the line below. [3]

4) Construct an accurate drawing of the triangle FGH in which GH=10cm, angle FGH=74° and angle GHF = 16°

[3]

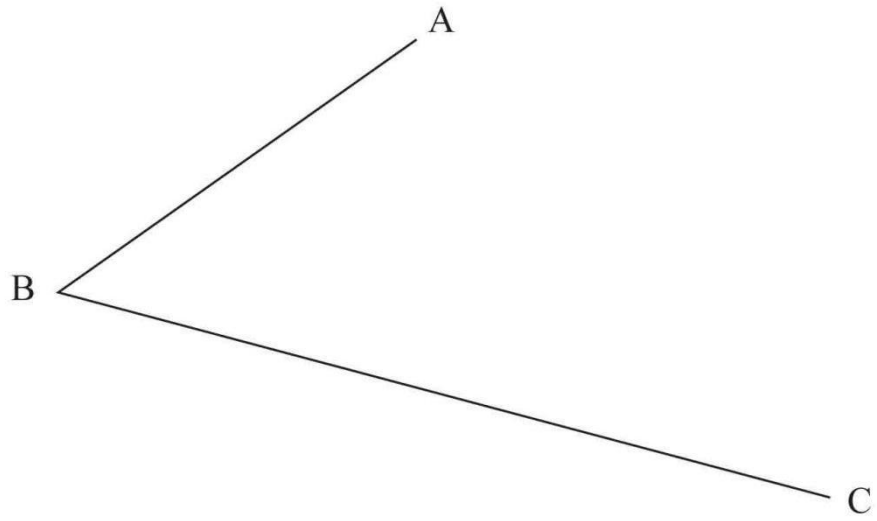
5) Complete an accurate drawing of triangle XYZ in which $XY = 8\,\text{cm}$, $\hat{YXZ} = 98°$ and $\hat{XYZ} = 40°$. [3]

6)
Using a ruler and a pair of compasses, construct the perpendicular bisector of the line XY.

[2]

7) Use ruler and compasses to construct the bisector of the angle ABC.

You must show all construction lines.



[2]

8) **(i)** Draw a line of length 9 cm starting at the point marked X. [1]

X.

(ii) Now draw a line perpendicular to your line which goes through its mid-point. [2]

9) *MacReardon Construction* is contracted to work on a warehouse site where there are a number of liquid storage tanks.

A sketch of the base of one of the liquid storage tanks is shown below.

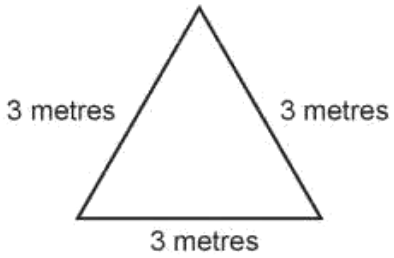


Diagram not drawn to scale

(a) Use a pair of compasses and a ruler to make an accurate scale drawing of the base shown above.
Use a scale of **2 cm to represent 1 metre**. [3]

10) Using ruler and compasses only, construct the perpendicular bisector of the line PQ.

Show your construction lines.

[2]

11) The scale used for the plan is

1 cm represents 10 metres.

The actual distance between the points A, B and C are $AB = 100$ metres, $AC = 60$ metres and $BC = 75$ metres.
The point B is due East of point A.

Draw an accurate diagram to show where these points would be on the plan.
Point A has been put in for you.

[4]

12) Jack is planning to build a fence across his field.
He has placed a note on the sketch of his field to show where he intends to place the fence.

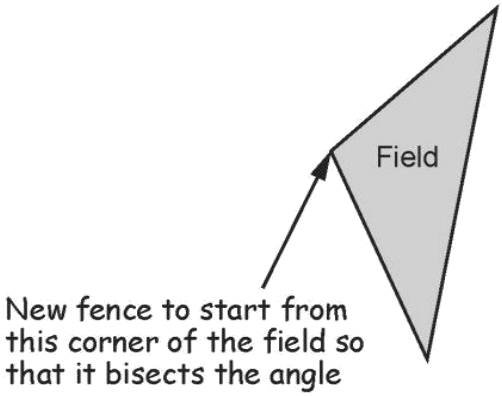


Diagram not drawn to scale

Complete the scale drawing below to show where the new fence is to be placed.
You must use a pair of compasses and a ruler to bisect the obtuse angle.
You must show all of your construction marks on the diagram. [2]