

Write your name here

Surname

Other names

In the style of:
Pearson Edexcel
GCSE

Centre Number

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Candidate Number

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Mathematics

Locus and Constructions

Higher Tier

GCSE style questions arranged by topic

Paper Reference

1MA0/1H

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser.

Total Marks



Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- **Calculators may not be used.**
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all your working out.**

Information

- The total mark for this paper is 80
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►



1 (a) Draw the locus of all points which are equidistant from the points C and D .

$C \times$

$\times D$

(2)

(b) Draw the locus of all points that are exactly 3 cm from the line EF .

E

F

(2)

(Total for Question 1 is 4 marks)



2 Draw the locus of all points which are equidistant from the lines XY and XZ .



(Total for Question 2 is 2 marks)

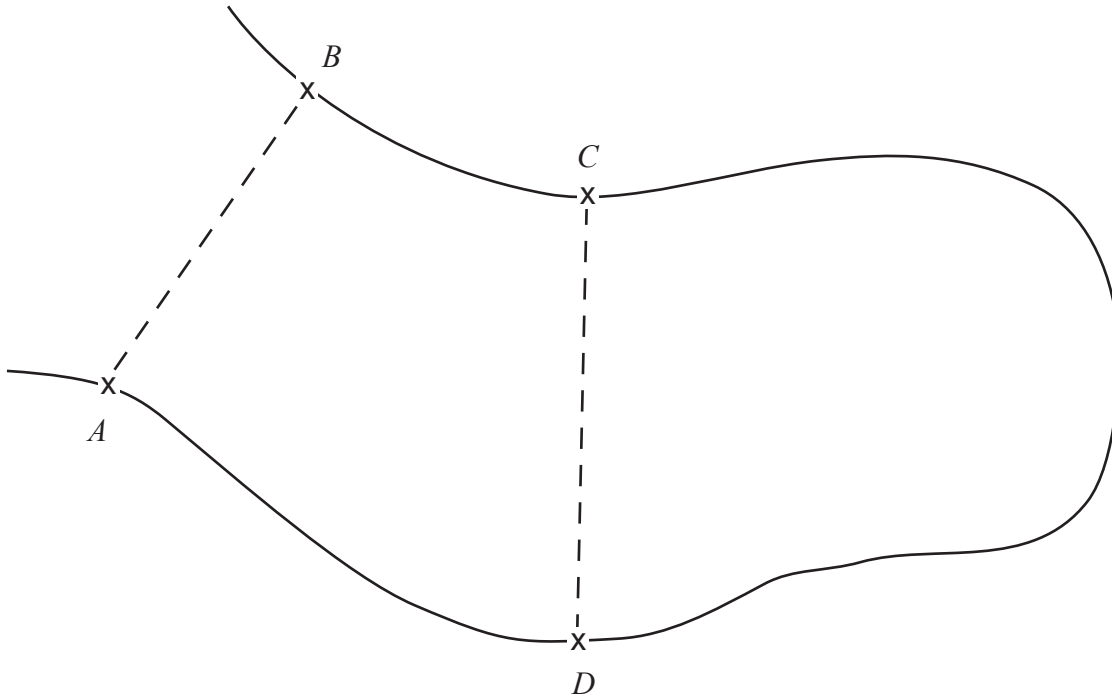


3 The map shows part of a golf course.

A golfer has to hit a ball so that its path between AB and CD is a straight line

and is always the same distance from *A* as from *B*

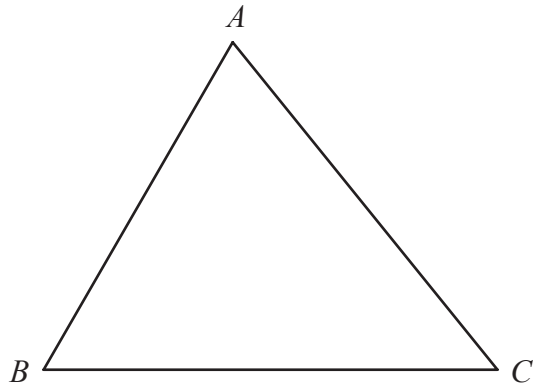
On the map, draw the path the ball should take.



(Total for Question 3 is 2 marks)



4



ABC is a triangle.

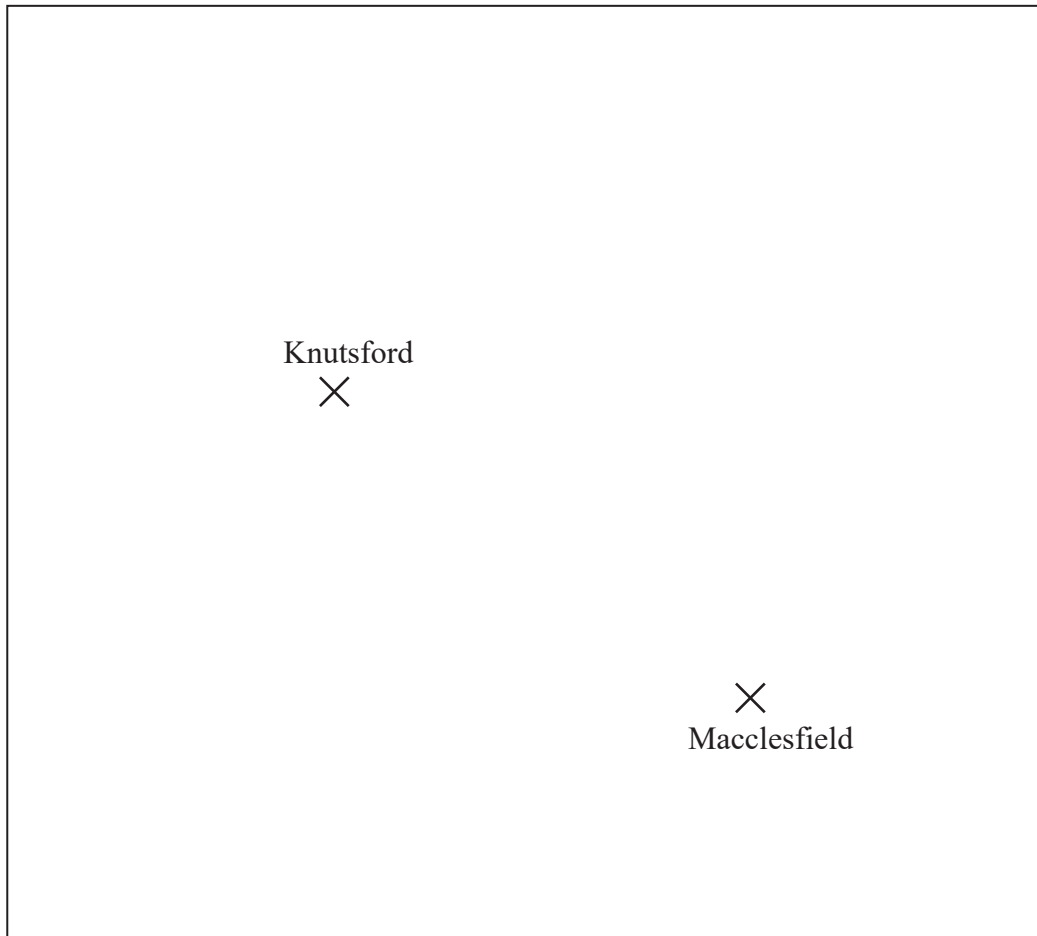
Shade the region inside the triangle which is **both**

and less than 4 centimetres from the point B
closer to the line AC than the line AB .

(Total for Question 4 is 4 marks)



- 5 Here is a map.
The map shows two towns, Knutsford and Macclesfield.



Scale: 1 cm represents 10 km

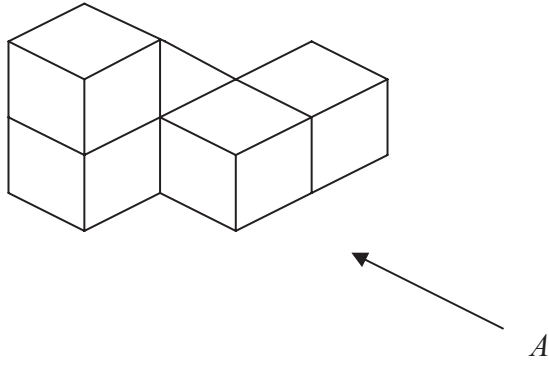
A company is going to build a glasshouse.

The glasshouse will be less than 30 km from Knutsford **and** less than 50 km from Macclesfield. Shade the region on the map where the company can build the glasshouse.

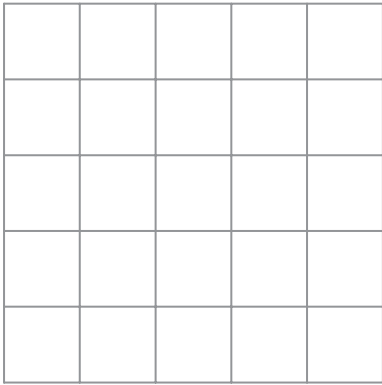
(Total for Question 5 is 3 marks)



6 The diagram represents a solid made from 5 identical cubes.



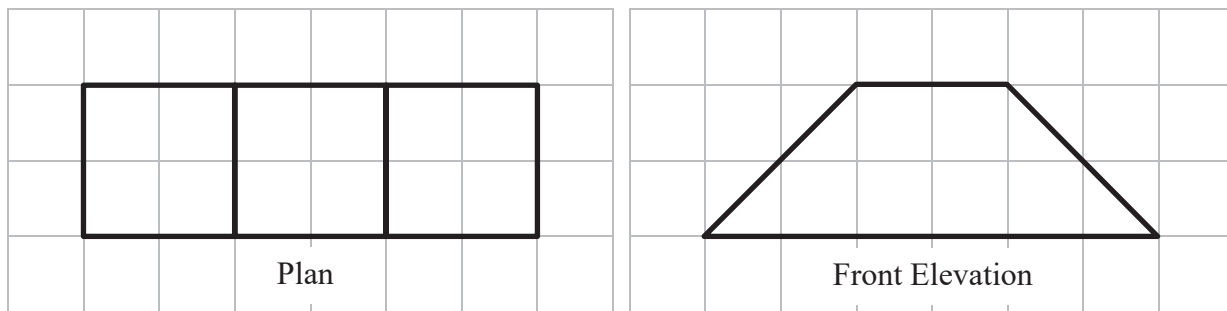
On the grid below, draw the view of the solid from direction *A*.



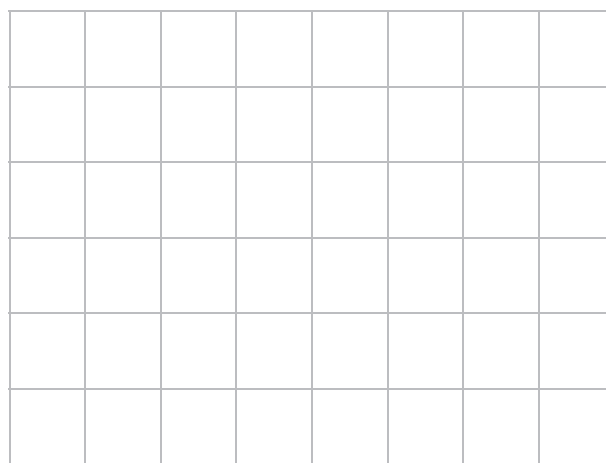
(Total for Question 6 is 2 marks)



7 Here are the plan and front elevation of a solid shape.



(a) On the grid below, draw the side elevation of the solid shape.



(2)

(b) In the space below, draw a sketch of the solid shape.

(2)

(Total for Question 7 is 4 marks)



8 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.

One side of the triangle has already been drawn for you.



(Total for Question 8 is 2 marks)



9 Here is a sketch of a quadrilateral.

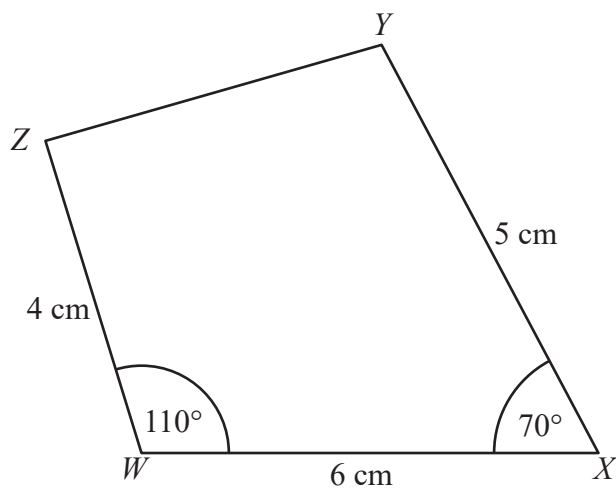


Diagram **NOT** accurately drawn

Make an accurate drawing of the quadrilateral $WXYZ$ in the space below.
The point W , marked with a cross (\times), has been drawn for you.

$W \times$

(Total for Question 9 is 4 marks)



10 (a) On the grid, draw an isosceles triangle.



(1)

(b) On the grid, draw a rectangle with an area of 20 cm².



(2)

(Total for Question 10 is 3 marks)

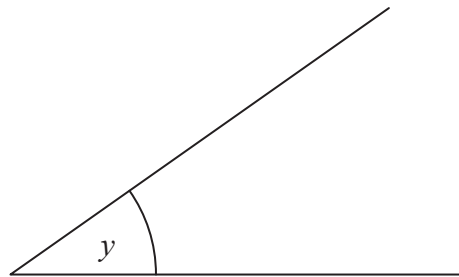


- 11 (a) Measure the length of the line AB .
Give your answer in centimetres.



..... cm
(1)

- (b) Measure the size of angle y .



..... °
(1)

- (c) In the space below, draw accurately a circle of radius 4 cm.
Use the point C as the centre of your circle.

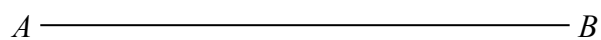
$\times C$

(Total for Question 11 is 3 marks)
(1)



12 Use ruler and compasses to **construct** the perpendicular bisector of the line AB .

You must show all your construction lines.



(2)

(Total for Question 12 is 2 marks)



- 13** Use ruler and compasses to **construct** an angle of 30° at T .
You **must** show all your construction lines.

T —————

(Total for Question 13 is 3 marks)

