Write your name here

Surname	Other names

In the style of:

Edexcel GCSE

Centre Number | | | | | |

Candidate Number | | | | |

Mathematics A

Locus and Constructions

Higher Tier

Past Paper Style Questions
Arranged by Topic

Paper Reference
1MA0/2H

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator. Tracing paper may be used.

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 be used.**

Information

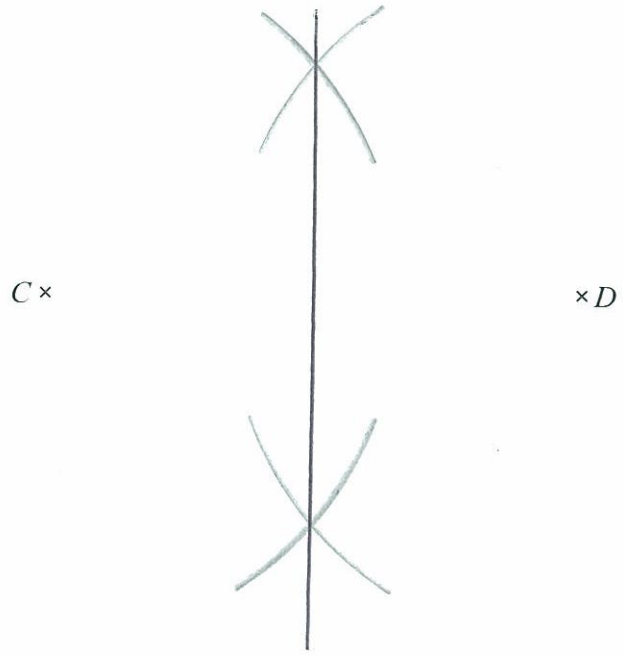
- The total mark for this paper is 100
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed.

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.

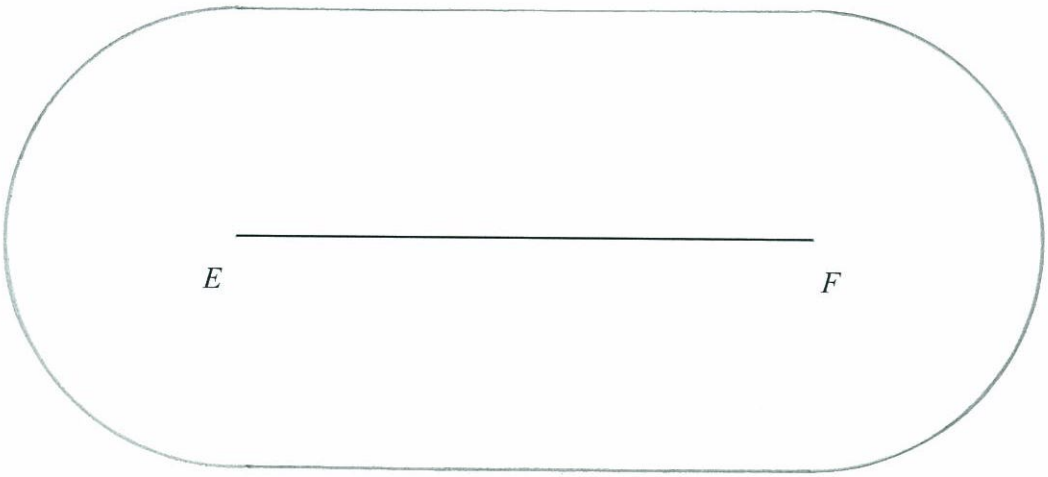
Turn over ▶

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



(2)

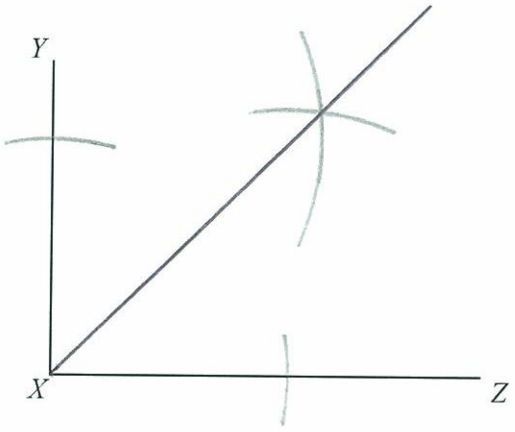
(b) Draw the locus of all points that are exactly 3 cm from the line EF.



(2)

(Total 4 marks)

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



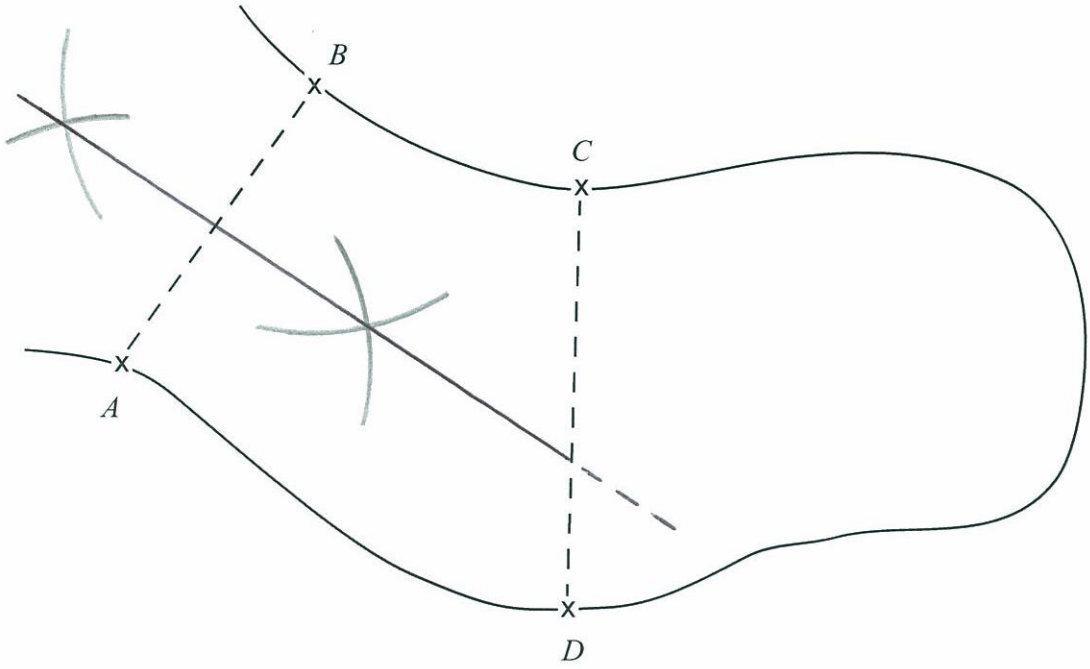
(Total 2 marks)

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

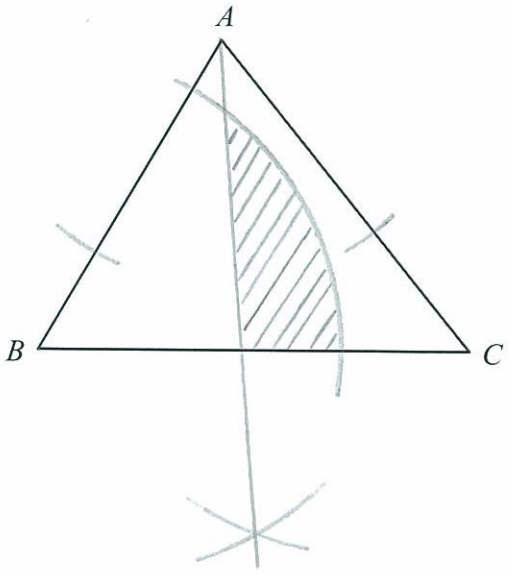
an is always the same distance from A as from B

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



(Total 2 marks)

4.



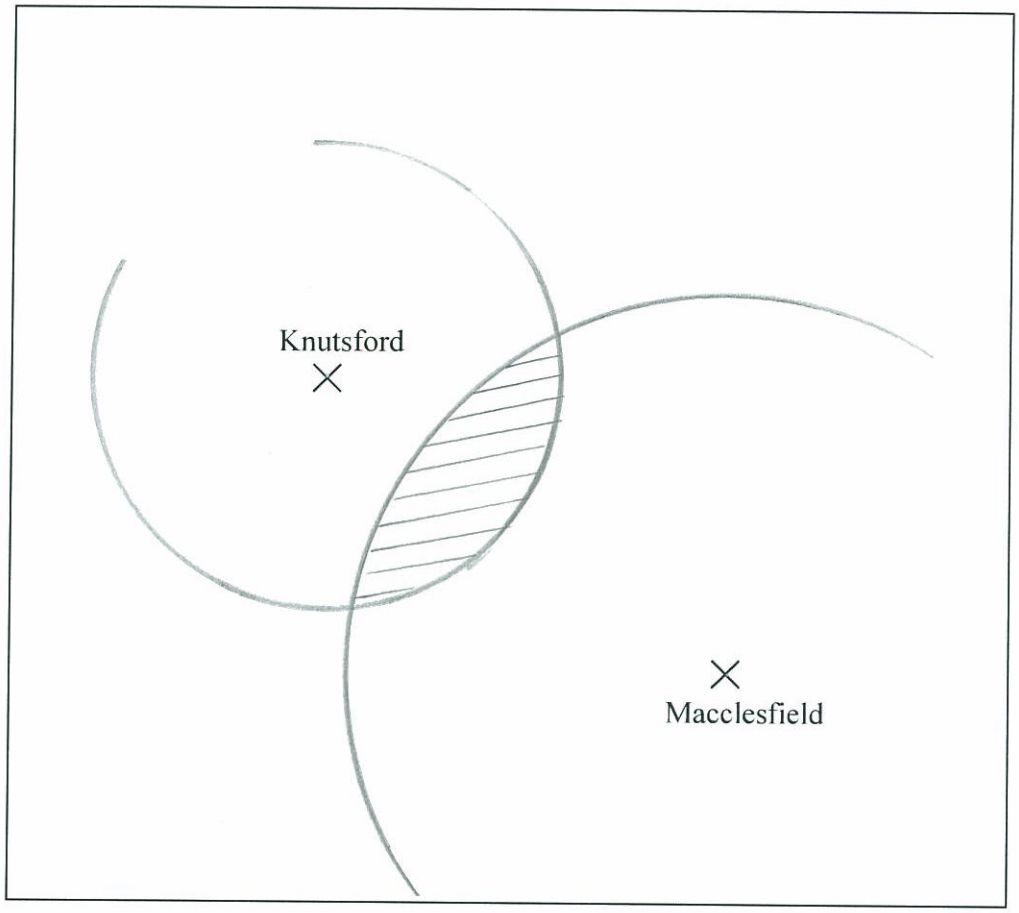
ABC is a triangle.

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

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

(Total 4 marks)

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



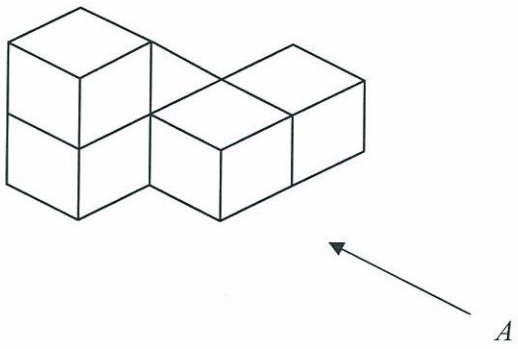
Scale: 1 cm represents 10 km

A company is going to build a glasshouse.

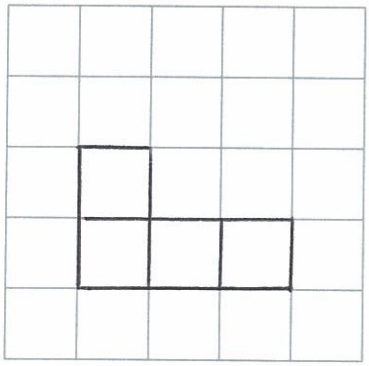
The glasshouse will be less than 30 km from Knutsford **and** less than 50 km from Macclesfield. Shade the region on the map where the company can build the glasshouse.

(Total for Question 10 is 3 marks)

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

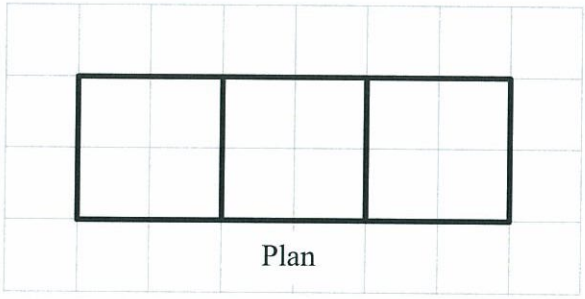


On the grid below, draw the view of the solid from direction A.

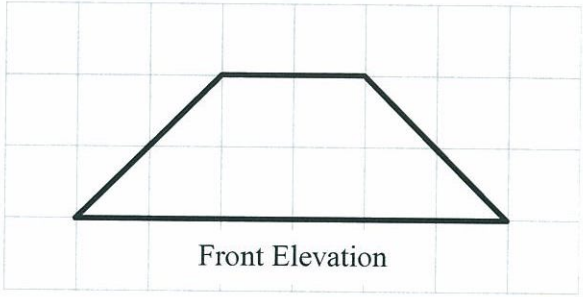


(Total 2 marks)

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

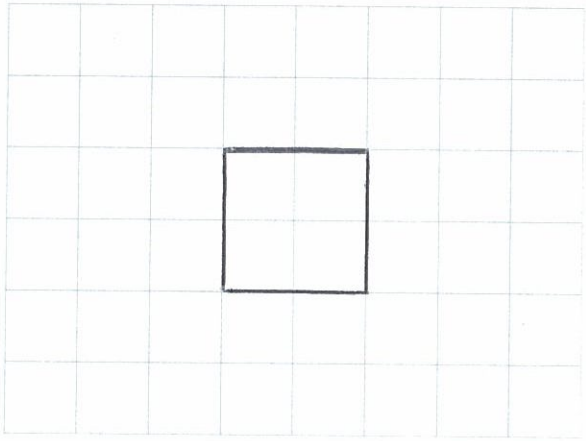


Plan



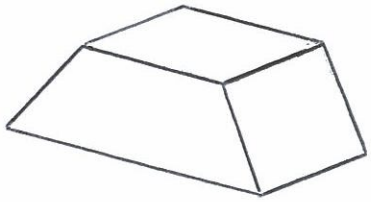
Front Elevation

(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.



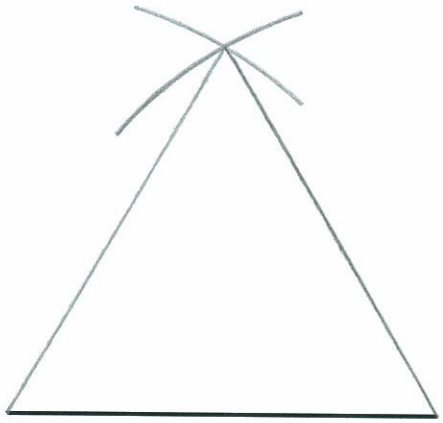
(2)

(Total 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 2 marks)

9. Here is a sketch of a quadrilateral.

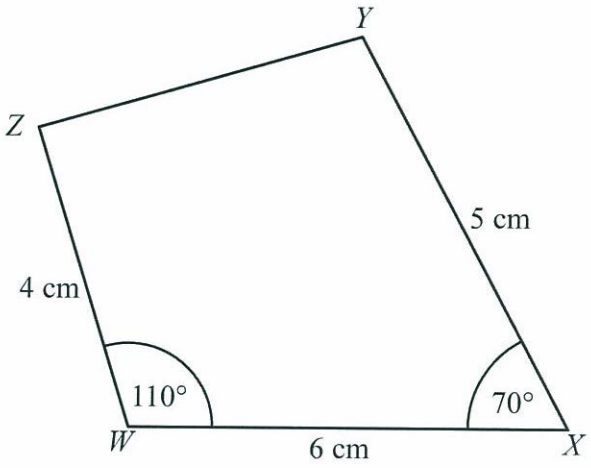
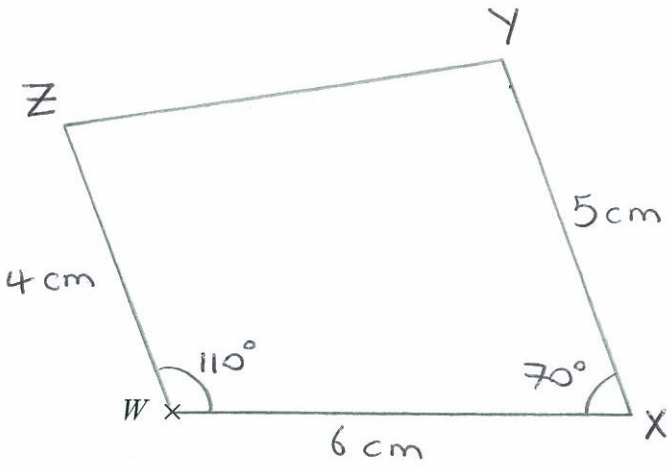


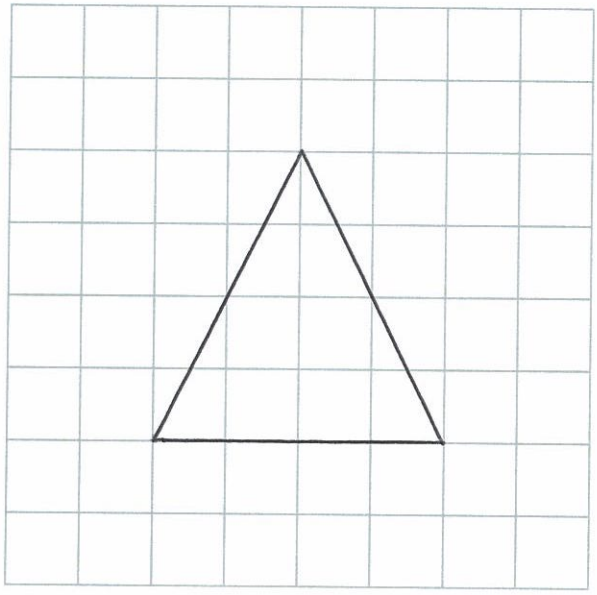
Diagram **NOT** accurately drawn

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



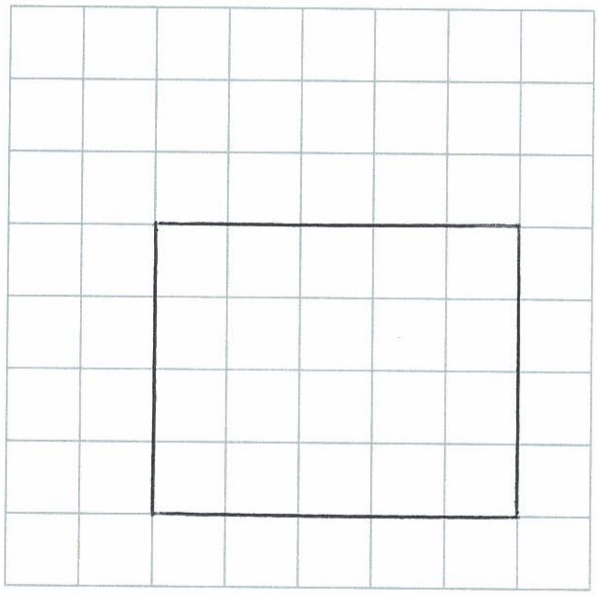
(Total 4 marks)

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



(1)

(b) On the grid, draw a rectangle with an area of 20 cm^2.



(2)

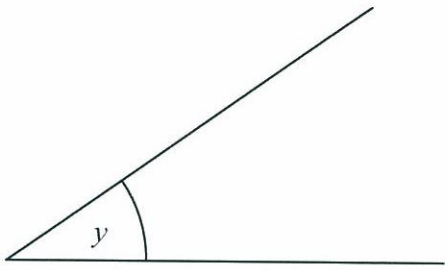
(Total 3 marks)

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

7.7 cm

(1)

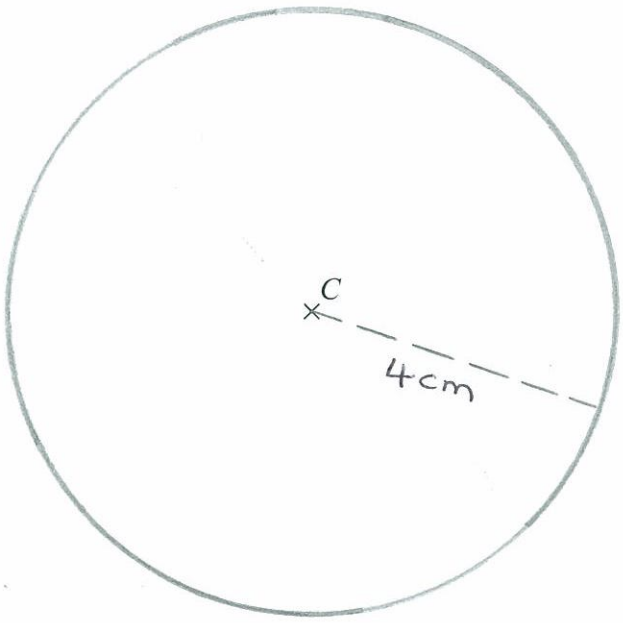
(b) Measure the size of angle y.



35 °

(1)

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

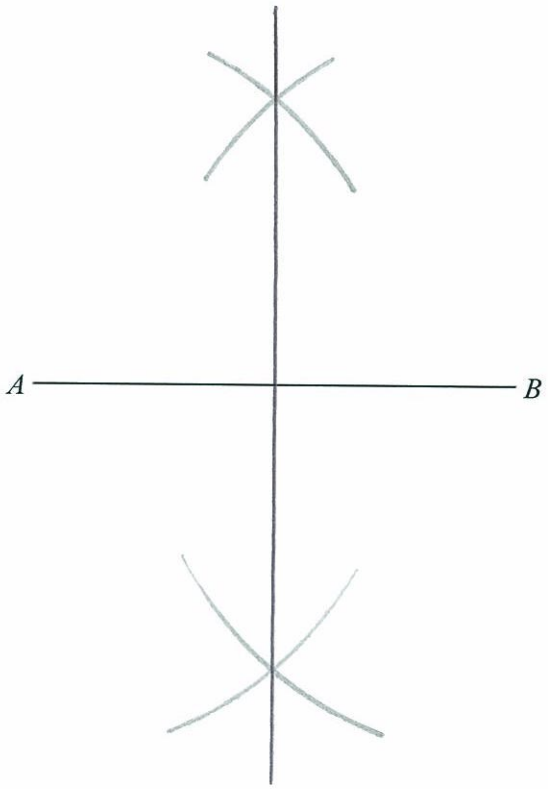


(1)

(Total 3 marks)

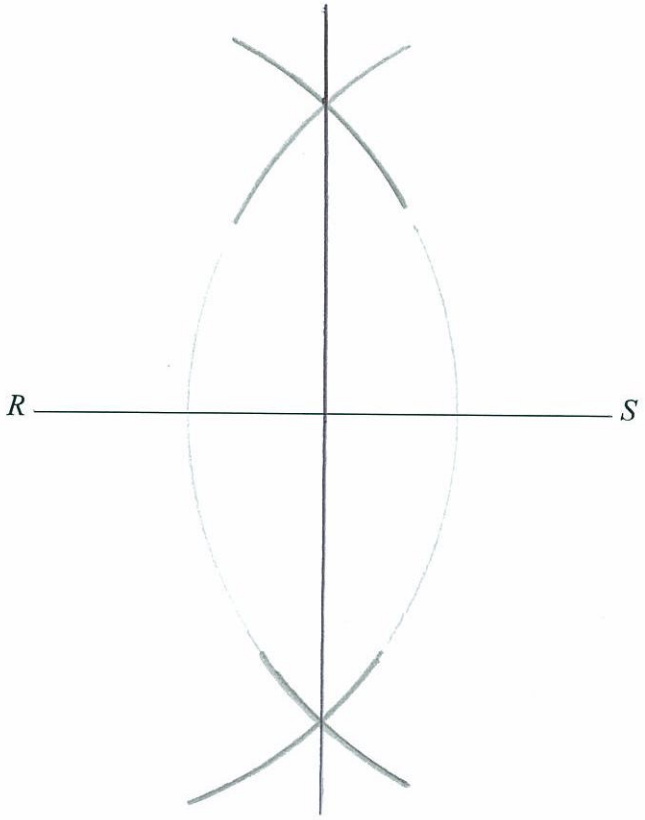
12. Use ruler and compasses to **construct** the perpendicular bisector of the line AB.

You must show all your construction lines.



(Total 2 marks)

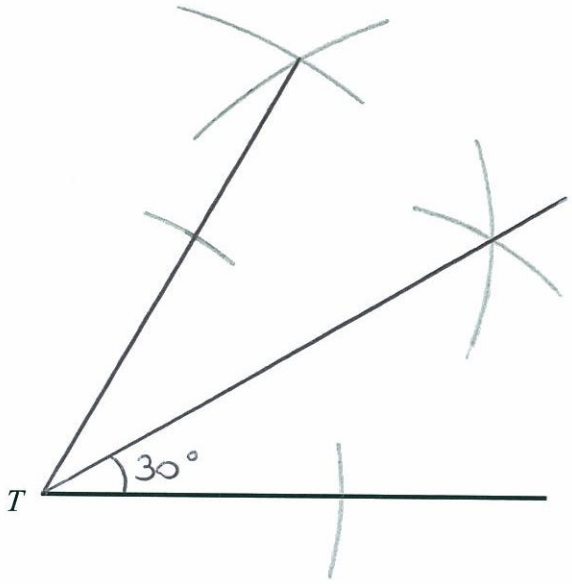
(b) Use ruler and compasses to construct the perpendicular bisector of the line *RS*.
You must show all your construction lines.



(2)

(Total 4 marks)

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



(Total 3 marks)

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