

Centre No.						Paper Reference						Surname	Initial(s)	
Candidate No.						1	3	8	0	/	4	H	Signature	

Paper Reference(s)

**1380/4H**

**Edexcel GCSE**

**Mathematics (Linear) – 1380**

Papers 3 and 4

**Locus and Constructions**

Past Paper Questions

Arranged by Topic

Examiner's use only

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Team Leader's use only

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**Materials required for examination**

Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser, calculator. Tracing paper may be used.

**Items included with question papers**

Nil

**Instructions to Candidates**

In the boxes above, write your centre number, candidate number, your surname, initials and signature.

Check that you have the correct question paper.

Answer ALL the questions. Write your answers in the spaces provided in this question paper.

**You must NOT write on the formulae page.**

**Anything you write on the formulae page will gain NO credit.**

If you need more space to complete your answer to any question, use additional answer sheets.

**Information for Candidates**

The marks for individual questions and the parts of questions are shown in round brackets: e.g. (2).

There are 26 questions in this question paper. The total mark for this paper is 100.

There are 24 pages in this question paper. Any blank pages are indicated.

**Calculators may be used.**

If your calculator does not have a  $\pi$  button, take the value of  $\pi$  to be 3.142 unless the question instructs otherwise.

**Advice to Candidates**

Show all stages in any calculations.

Work steadily through the paper. Do not spend too long on one question.

If you cannot answer a question, leave it and attempt the next one.

Return at the end to those you have left out.

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Compiled by Peter Bland



*Turn over*

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1. (a) Draw the locus of all points which are equidistant from the points  $A$  and  $B$ .

$A \times$

$\times B$

(2)

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

$P$

$Q$

(2)

Q1

(Total 4 marks)

Leave  
blank

2. Draw the locus of all points which are equidistant from the lines  $AB$  and  $AC$ .



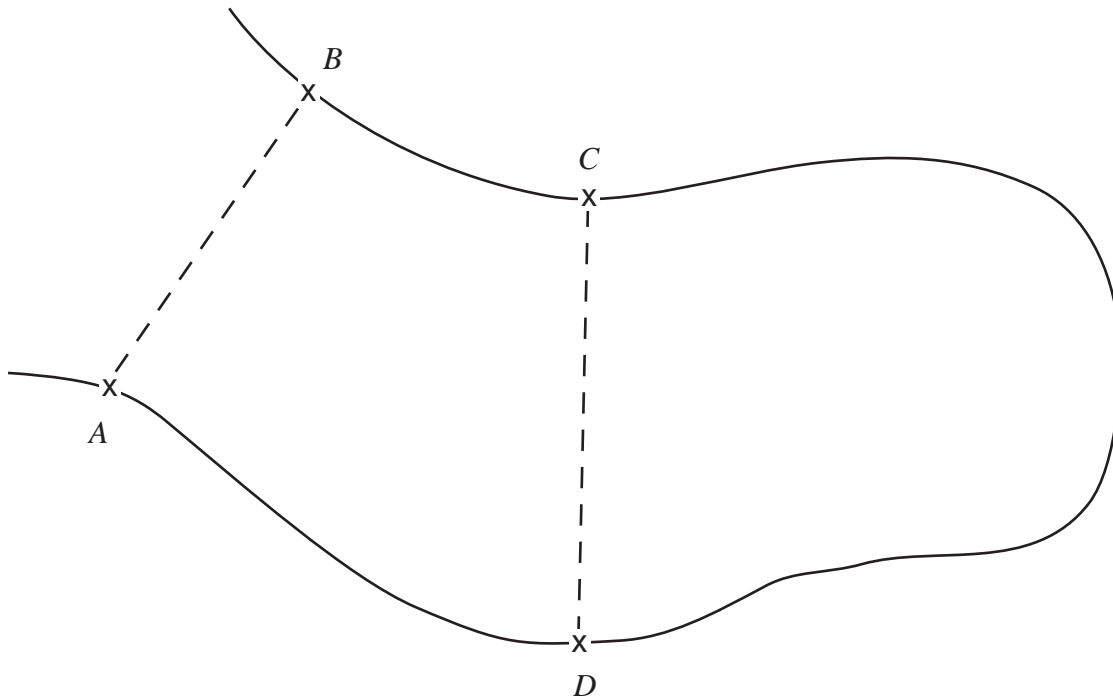
Q2

(Total 2 marks)

3. The map shows part of a lake.

In a competition for radio controlled boats, a competitor has to steer a boat so that its path between  $AB$  and  $CD$  is a straight line  
this path is always the same distance from  $A$  as from  $B$

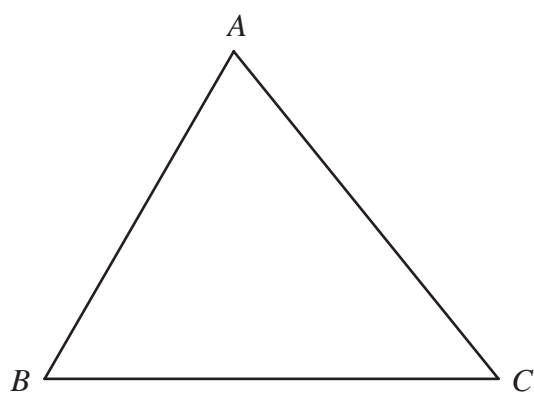
On the map, draw the path the boat should take.



Q3

(Total 2 marks)

4.



$ABC$  is a triangle.

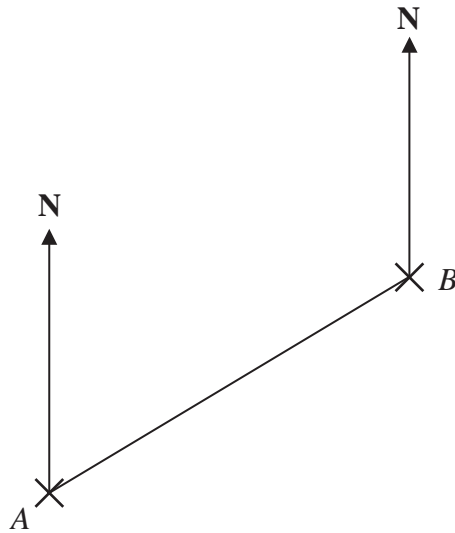
Shade the region inside the triangle which is **both**

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

Q4

(Total 4 marks)

5. The diagram shows the positions of two telephone masts, *A* and *B*, on a map.



(a) Measure the bearing of *B* from *A*.

.....<sup>o</sup>  
(1)

Another mast *C* is on a bearing of  $160^\circ$  from *B*.  
On the map, *C* is 4 cm from *B*.

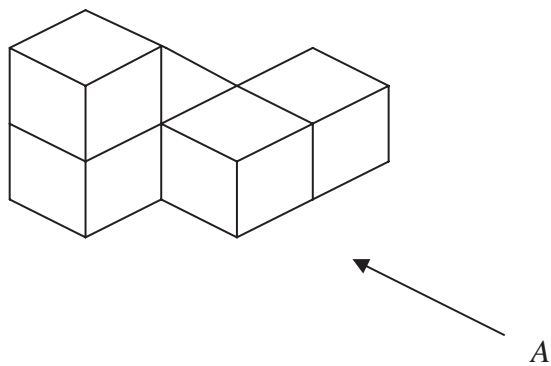
(b) Mark the position of *C* with a cross (×) and label it *C*.

(2)

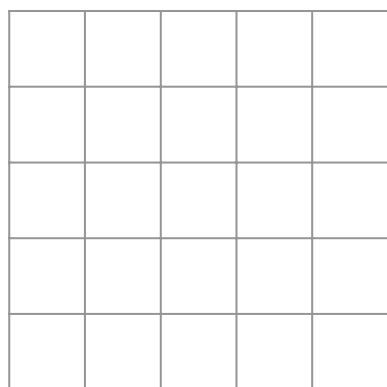
(Total 3 marks)

Q5

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



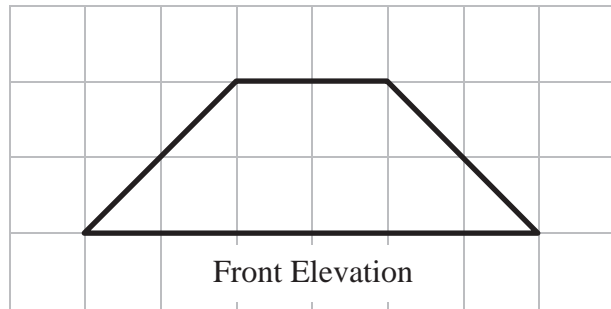
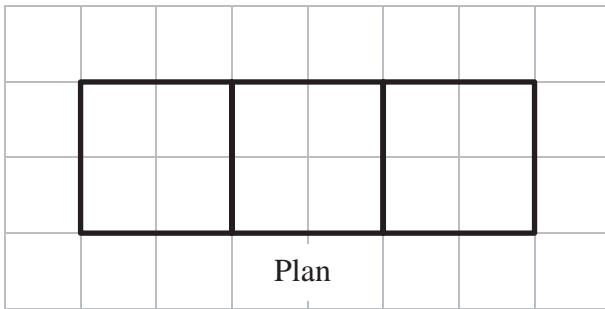
On the grid below, draw the view of the solid from direction A.



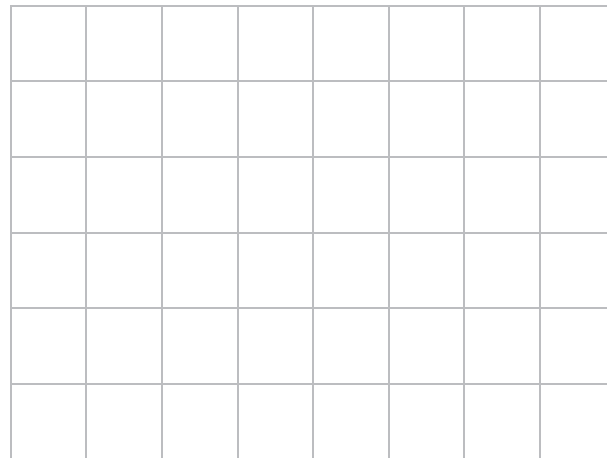
Q6

(Total 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)

Q7

(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)

Q8

Leave  
blank

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

You must show all your construction lines.

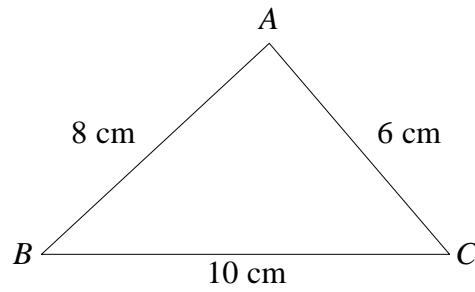
$A$  —————  $B$

Q9

(Total 2 marks)

10.

Diagram **NOT**  
accurately drawn



$ABC$  is a triangle.

$AB = 8$  cm.

$AC = 6$  cm.

$BC = 10$  cm.

- (a) Use ruler and compasses to construct an accurate drawing of triangle  $ABC$ .  
The line  $BC$  has been drawn for you.  
You must show all your construction lines.

$B$  \_\_\_\_\_  $C$

(2)

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

$P$  \_\_\_\_\_  $Q$

(2) **Q10**

(Total 4 marks)

Leave  
blank

11. Use ruler and compasses to **construct** an angle of  $30^\circ$  at  $P$ .  
You **must** show all your construction lines.

$P$  —————

(Total 3 marks)

Q11

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