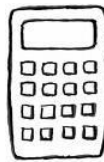


Name:

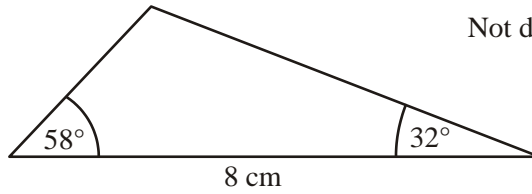
Teacher
Assessment



Section A **Constructing Shapes** **Grade D / C**

1. Here is a sketch of a triangle.

Not drawn accurately



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

(Total 3 marks)

2. In triangle ABC , the side AB is 7 cm. Angle $A = 40^\circ$ and angle $B = 95^\circ$.

Make an accurate drawing of the triangle in the space below.
The side AB has been drawn for you.

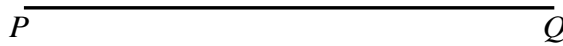


(Total 2 marks)

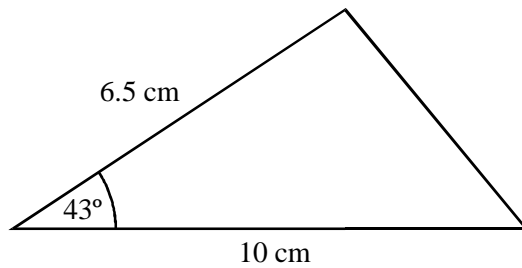
3. In triangle PQR , the side $PQ = 7.5$ cm.
Angle $P = 70^\circ$ and angle $R = 80^\circ$.

Make an accurate drawing of the triangle in the space below.
The line PQ has been drawn for you.

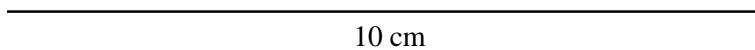
(Total 3 marks)



4. In the space below, make an accurate drawing of this triangle.
The base line has been drawn for you.



Not drawn accurately



(Total 2 marks)

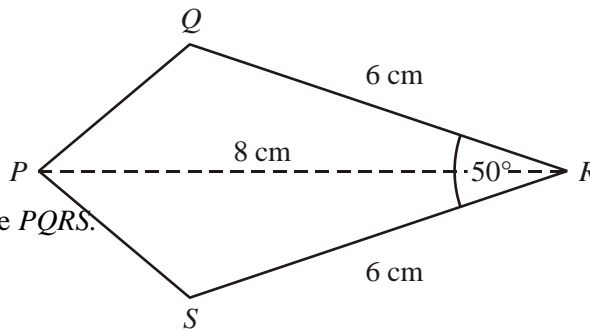
5. In triangle ABC , angle $A = 100^\circ$, $AB = 7$ cm and $AC = 4$ cm.

Make an accurate drawing of the triangle.
The side AB has been drawn for you.



(Total 2 marks)

6. The kite $PQRS$ is sketched below.
 $QR = SR = 6$ cm
Angle $QRS = 50^\circ$
The diagonal $PR = 8$ cm



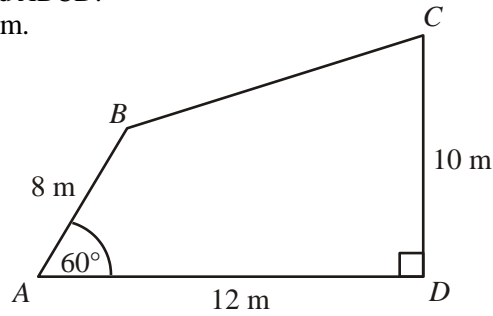
Not to scale

Make an accurate drawing of the kite $PQRS$.
 PR has been drawn for you.



(Total 3 marks)

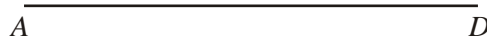
7. The diagram shows the plan of a field $ABCD$.
 $AB = 8$ m, $AD = 12$ m and $CD = 10$ m.
 Angle $A = 60^\circ$ and angle $D = 90^\circ$



Make a scale drawing of the field.
 Use the scale 1 cm represents 2 m.
 The line AD has been drawn for you.

Not to scale

Scale:
 1 cm
 represents
 2 m



(Total 3 marks)

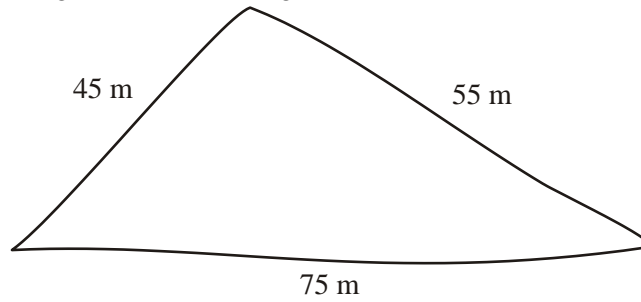
8. The sides of a parallelogram are 6 cm and 3.5 cm.
 The acute angle between the sides is 70° .

Make an accurate drawing of the parallelogram.
 A side of length 6 cm has been drawn for you.



(Total 4 marks)

9. The diagram shows a rough sketch of a triangular field.



- (a) Using ruler and compasses only, make an accurate scale drawing of the field.
Use a scale of 1 cm to represent 10 m.
You must show clearly all your construction arcs.

(3)

- (b) The length of one side of the field is 75 metres.
This length is measured to the nearest metre.

What is the smallest possible length of this side.

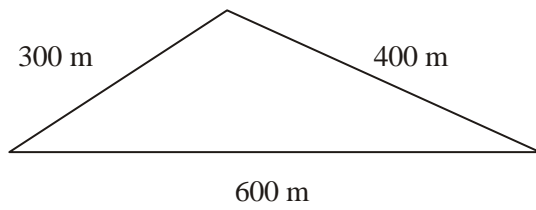
Answer m

(1)

(Total 4 marks)

10. A plot of land is in the shape of a triangle with sides 300 m, 400 m and 600 m.
The sketch shows the plot of land.

Not drawn accurately



Draw the triangle accurately, using a scale of 1 cm to 50 m.

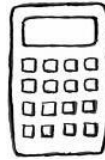
(Total 3 marks)

- 11.** Use a ruler and compasses to construct a rhombus that has sides of 6 cm and whose shorter diagonal is 4 cm.

(Total 4 marks)

Success:

Target:

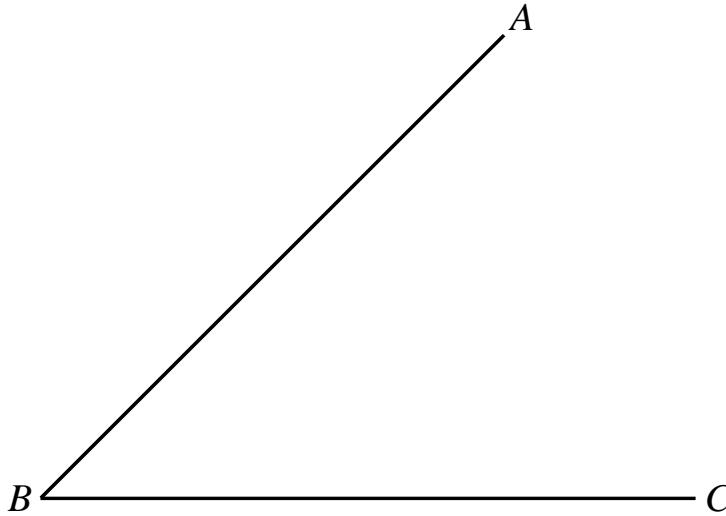


Section B

Four Constructions

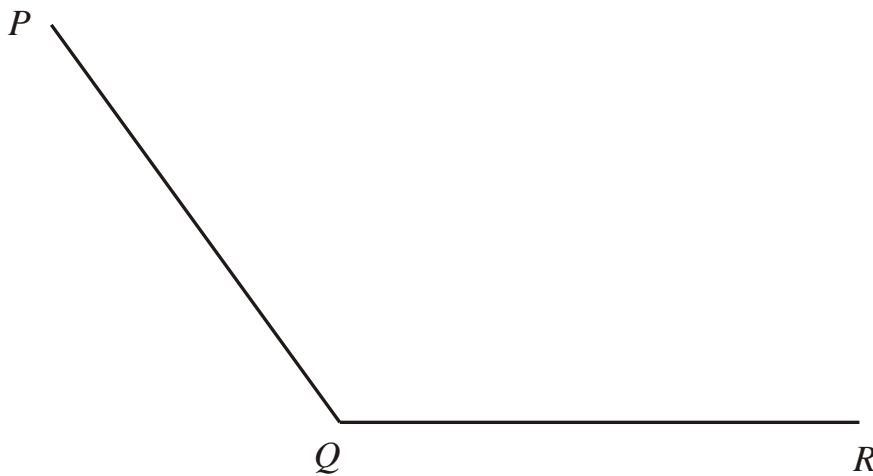
Grade D / C

1. Using ruler and compasses only, construct the bisector of angle ABC .



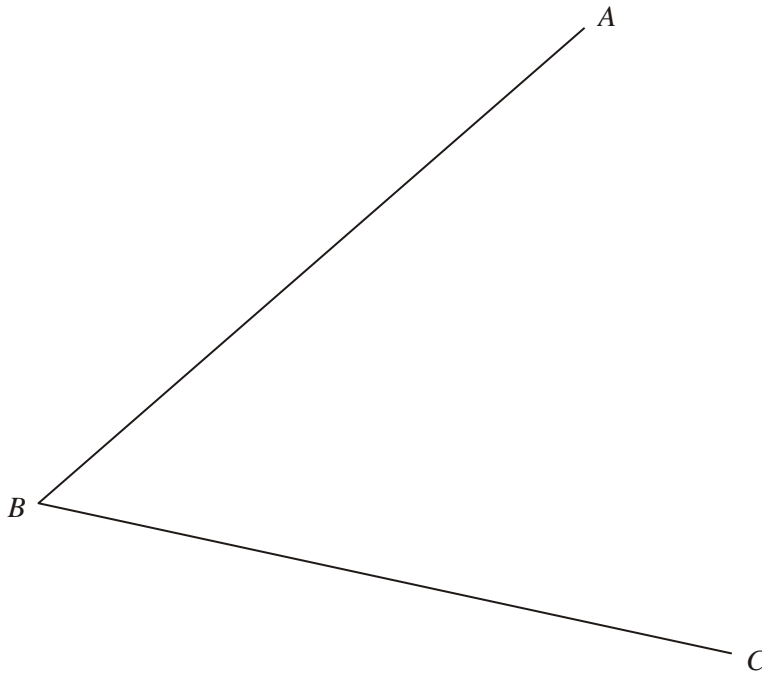
(Total 2 marks)

2. Using ruler and compasses only, construct the bisector of angle PQR .



(Total 2 marks)

3. Using a ruler and compasses construct the bisector of angle ABC .



(Total 2 marks)

4. (a) The line LM is drawn below.



Use ruler and compasses to construct the perpendicular bisector of LM .
You **must** show clearly all your construction arcs.

(2)

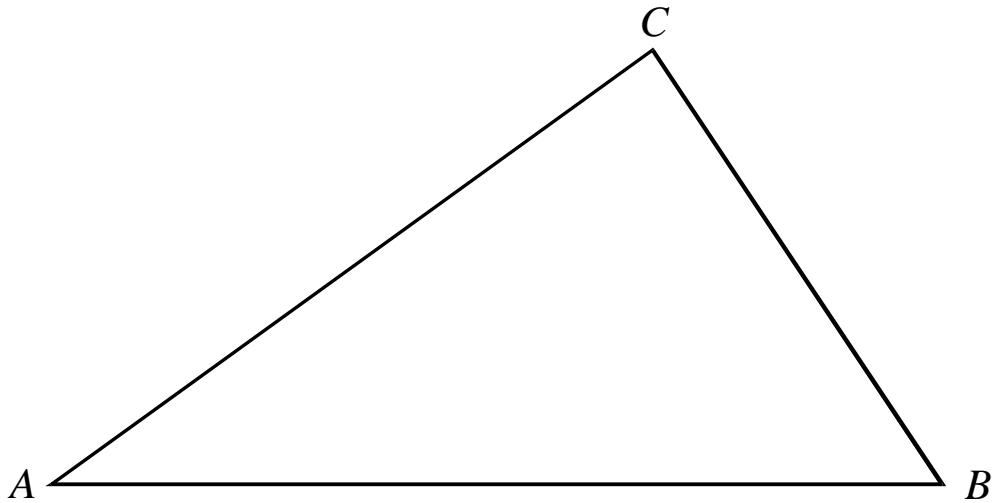
- (b) Complete the sentence. The perpendicular bisector of LM is the locus of points which are

.....

(1)

(Total 3 marks)

5. The diagram shows a triangle, ABC .

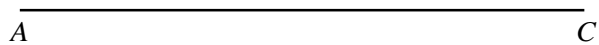
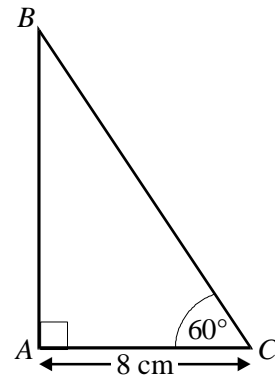


- (a) Using a ruler and compasses only, construct the perpendicular bisector of AB .
You **must** show clearly all your construction arcs. (2)
- (b) (i) Repeat this construction on another side of the triangle. (1)
- (ii) The point of intersection of the two bisectors is the centre of the circle which passes through A , B and C .
Draw this circle. (2)

(Total 5 marks)

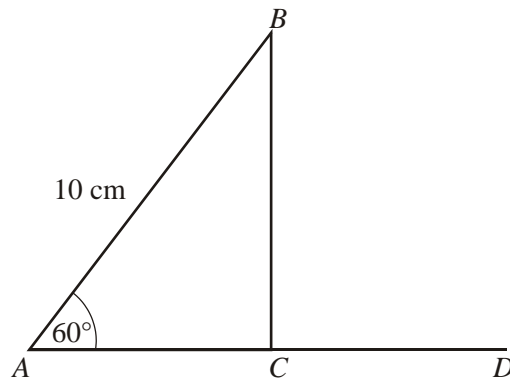
6. Using ruler and compasses only make an accurate drawing of triangle ABC .

AC has been drawn for you



(Total 4 marks)

7. ABC is a triangle.
 ACD is a straight line.



Not drawn accurately

Using a ruler and compasses only, make an accurate construction of this diagram.
You **must** show clearly all your construction arcs.
The line AD has been drawn for you.

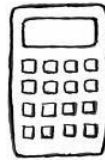
A

D

(Total 6 marks)

Success:

Target:

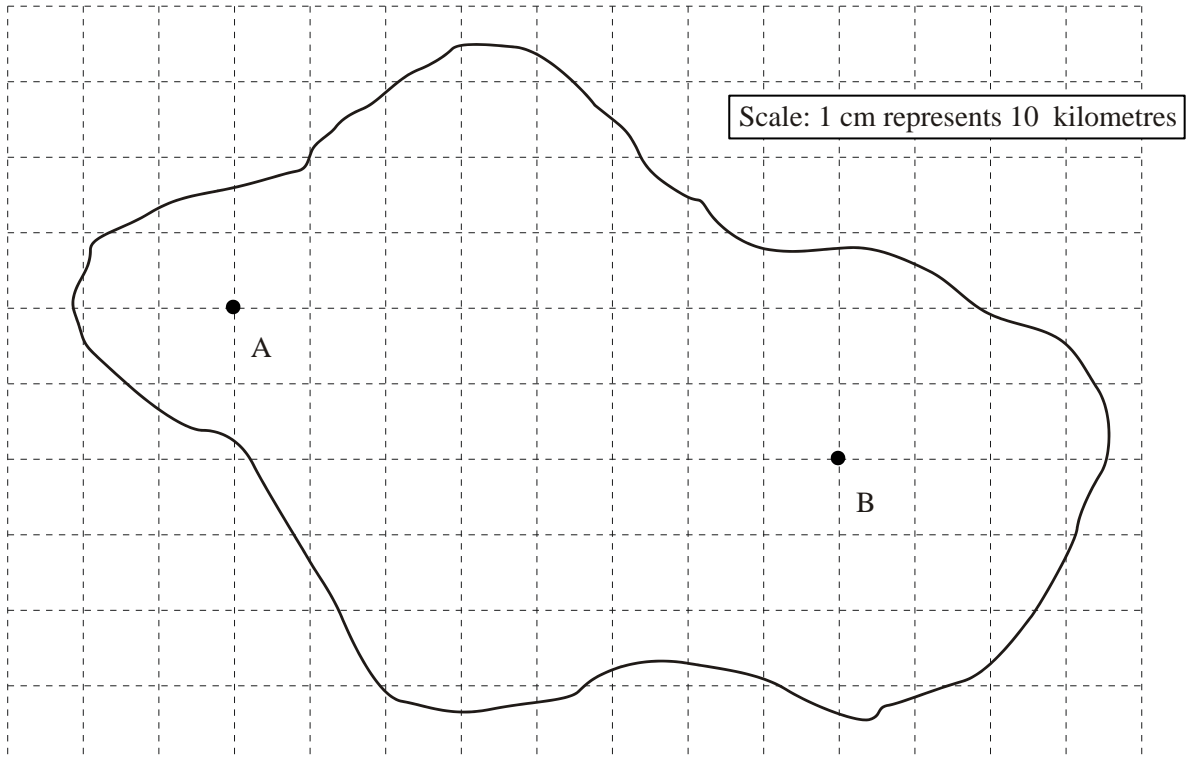


Section C

Loci

Grade C

1. There are two TV transmitters on an island.
The transmitter at A has a range of 40 km.
The transmitter at B has a range of 60 km.



Show clearly the area in which the signal from both transmitters can be received.

(Total 3 marks)

2. (a) Using a ruler and compasses only, construct an angle of 60°
Show all your construction lines and arcs.

(2)

- (b) Two lifeboat stations *A* and *B* receive a distress call from a boat.
The boat is within 6 kilometres of station *A*.
The boat is within 8 kilometres of station *B*.

Shade the possible area in which the boat could be.

Scale: 1 cm represents
1 km



(Total 2 marks)

3. The diagram shows three towns A , B and C . 1 cm represents 2 km.

Show on the diagram the region which is less than 10 km from all three towns.

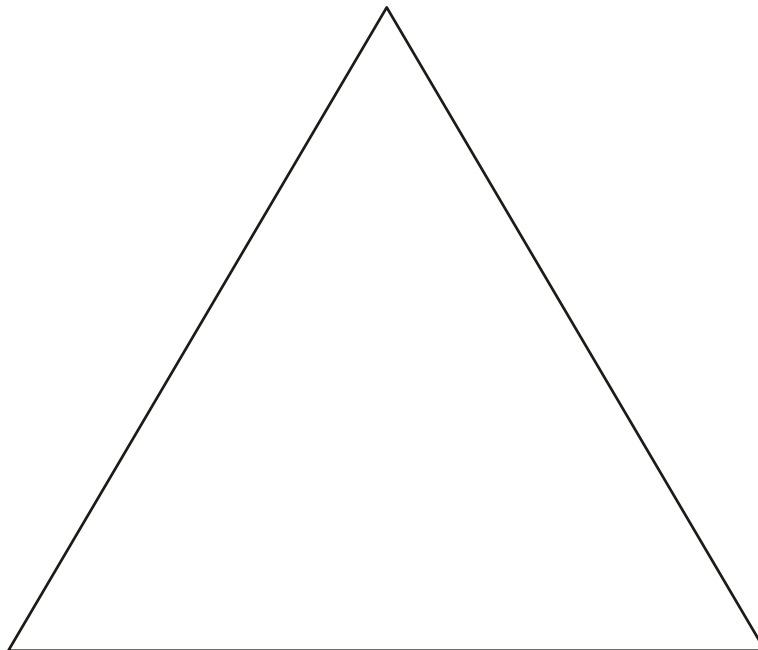
Scale: 1 cm represents 2 km



(Total 3 marks)

4. In this question, you should use a ruler and compasses.

The diagram shows an equilateral triangle of side 10 cm.



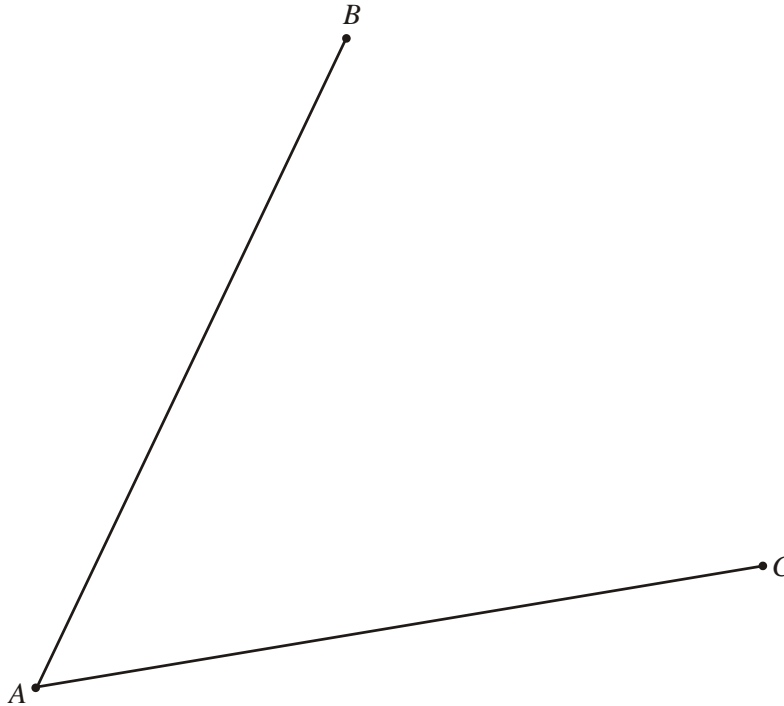
Show on the diagram all the points inside the triangle that are more than 5 cm from each vertex of the triangle.

You **must** show clearly all your construction arcs.

(Total 3 marks)

5. AB and AC represent two walls.
A mast is to be erected that is
equidistant from AB and AC
between 40 m and 70 m from A .

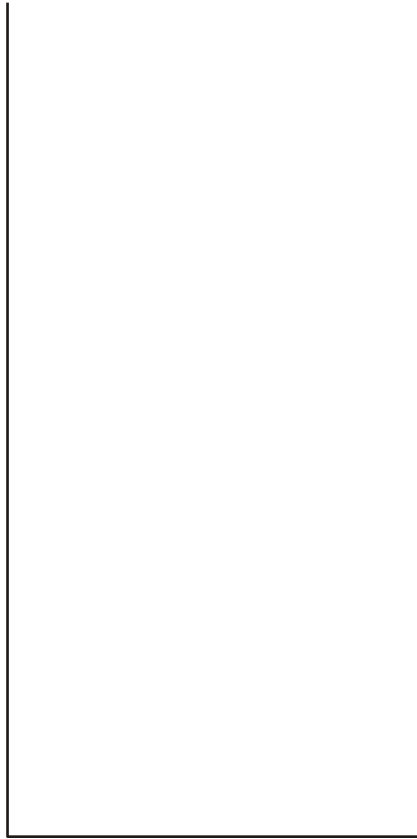
Scale: 1 cm represents 10 m



Show clearly all the possible positions of the mast.

(Total 3 marks)

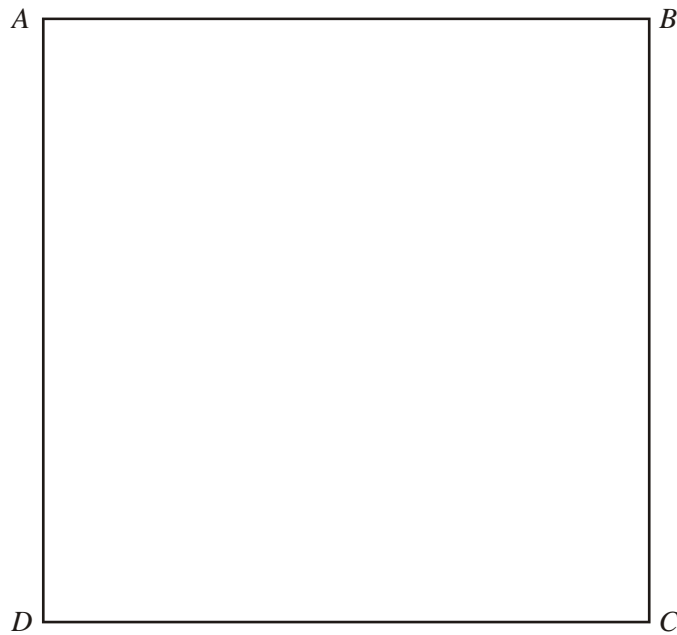
6. The diagram shows an L shape.



Draw the locus of all points 2 cm from the L shape.

(Total 3 marks)

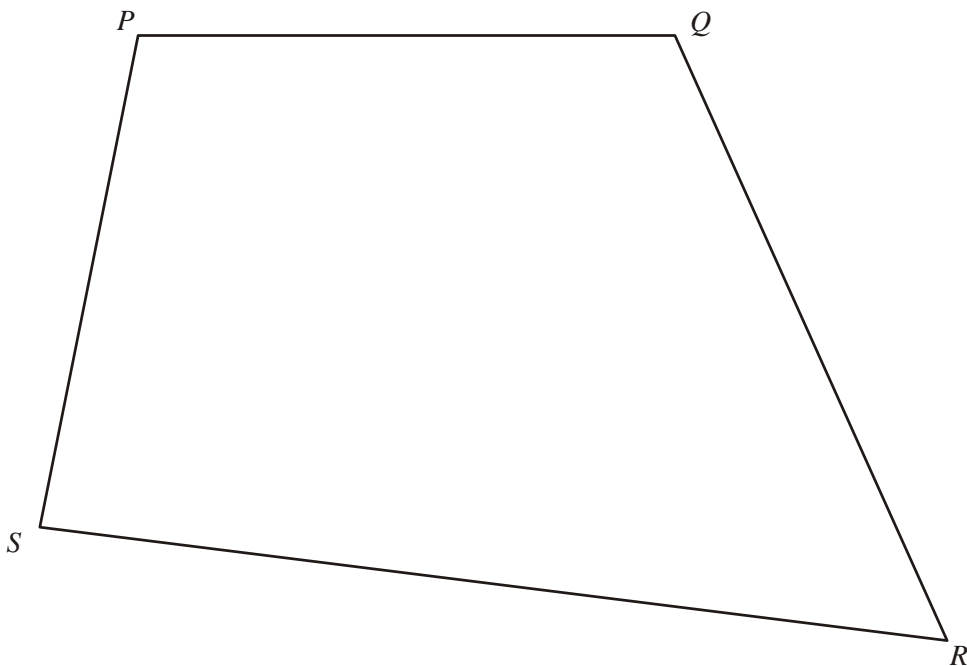
7. $ABCD$ is a square of side 8 cm.



Show clearly the region inside the square that is both closer to the point D than to the point A , and closer to the side CD than the side AD .

(Total 3 marks)

8. The diagram shows a quadrilateral $PQRS$.

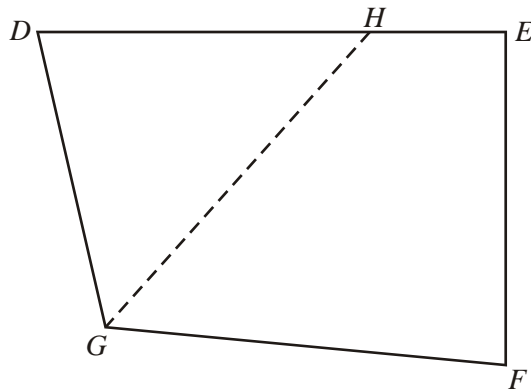


- (a) Draw the locus of points that are the same distance from P as from Q .

(2)

- (b) Shade the region inside the quadrilateral which is less than 7 cm from S and nearer to Q than to P .

9. The quadrilateral $DEFG$ is a scale drawing of a field.
The line GH bisects angle DGF .



Scale:
1 cm represents 10 m

- (a) Construct the locus of points in the field which are 40 m from E .

(1)

- (b) Shade the area of the field which is more than 40 m from E
and nearer to DG than to GF .

(1)

(Total 2 marks)

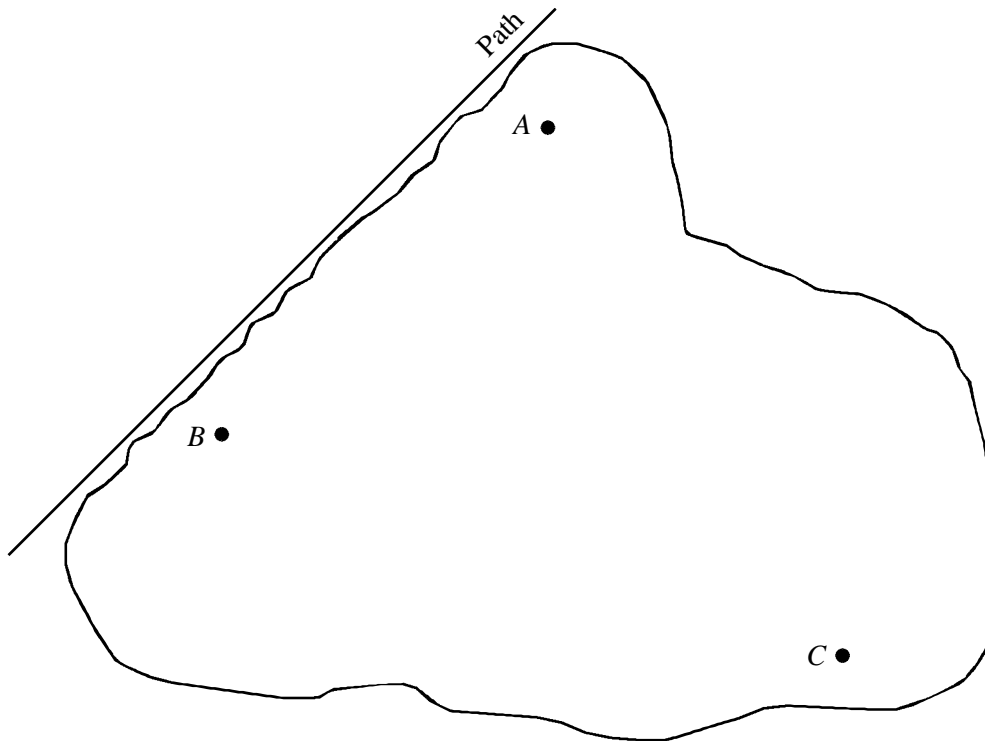
10. The map below shows three boats, *A*, *B* and *C*, on a lake. Along one edge of the lake there is a straight path.

Treasure lies at the bottom of the lake.

The treasure is:

between 150 m and 250 m from *B*,
nearer to *A* than *C*,
more than 100 m from the path.

Scale: 1 cm represents 50m



Using a ruler and compasses only, shade the region in which the treasure lies.

You **must** show clearly all your construction arcs.

(Total 5 marks)

Success:

Target: