



EXAM PAPERS PRACTICE

GCSE OCR Math J560

Loci & Construction

Answers

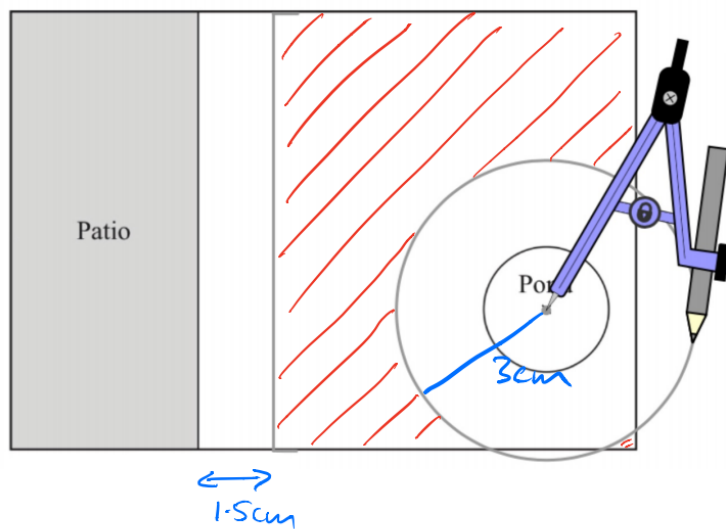
*"We will help you to
achieve A Star "*



Answer 1

The diagram shows a garden in the shape of a rectangle.

The scale of the diagram is 1 cm represents 2 m.



Scale: 1 cm represents 2 m

Irfan is going to plant a tree in the garden.

The tree must be

- and** more than 3 metres from the patio \longrightarrow 1.5cm
more than 6 metres from the centre of the pond. \longrightarrow 3cm

On the diagram, shade the region where Irfan can plant the tree.

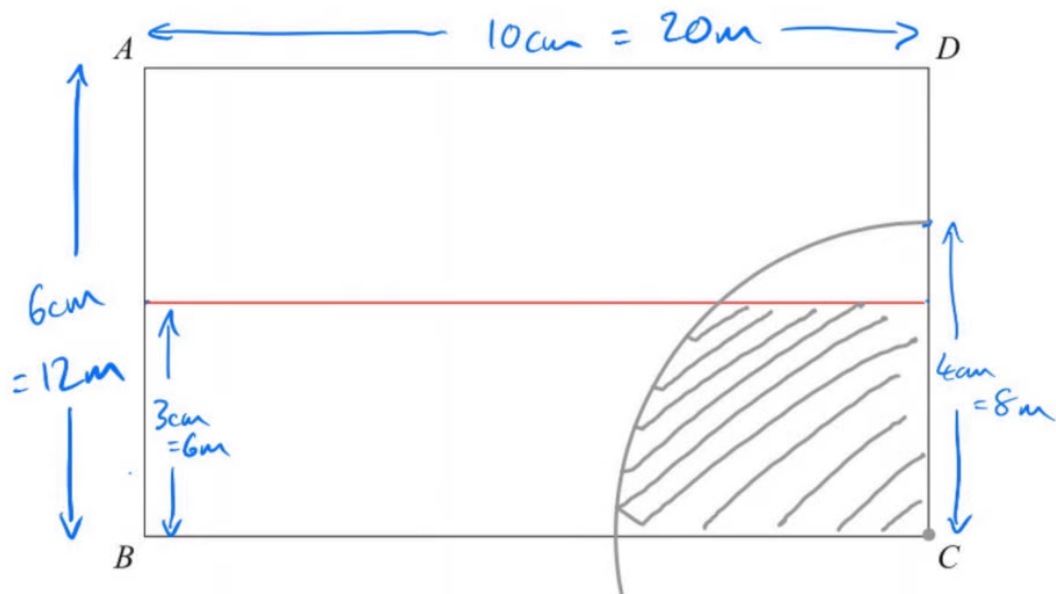
NB I MAY HAVE USED A SLIGHTLY
DIFFERENT SIZE OF DIAGRAM
SO MY SCALE MAY BE OUT...



Answer 2

Here is a scale drawing of an office.

The scale is 1 cm to 2 metres.



A photocopier is going to be put in the office.

The photocopier has to be closer to *B* than it is to *A*.

The photocopier also has to be less than 8 metres from *C*.

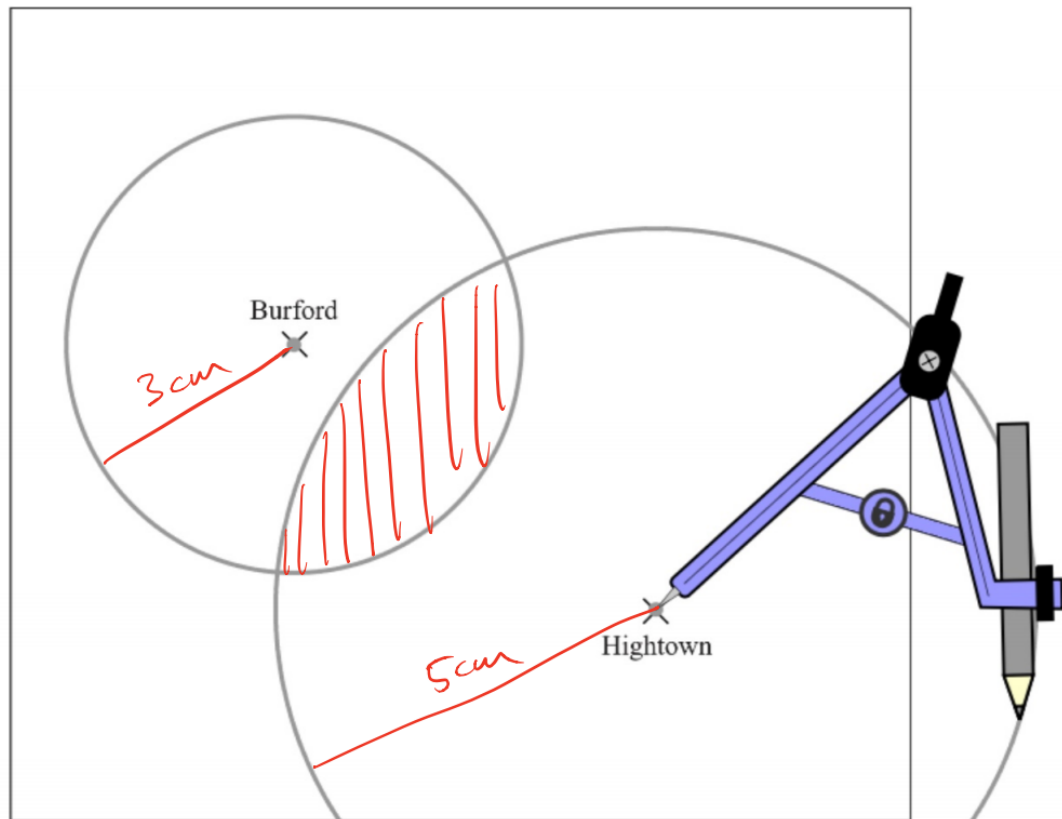
Show, by shading, the region where the photocopier can be put.



Answer 3

Here is a map.

The map shows two towns, Burford and Hightown.



Scale: 1 cm represents 10 km

A company is going to build a warehouse.

The warehouse will be less than 30 km from Burford and less than 50 km from Hightown.

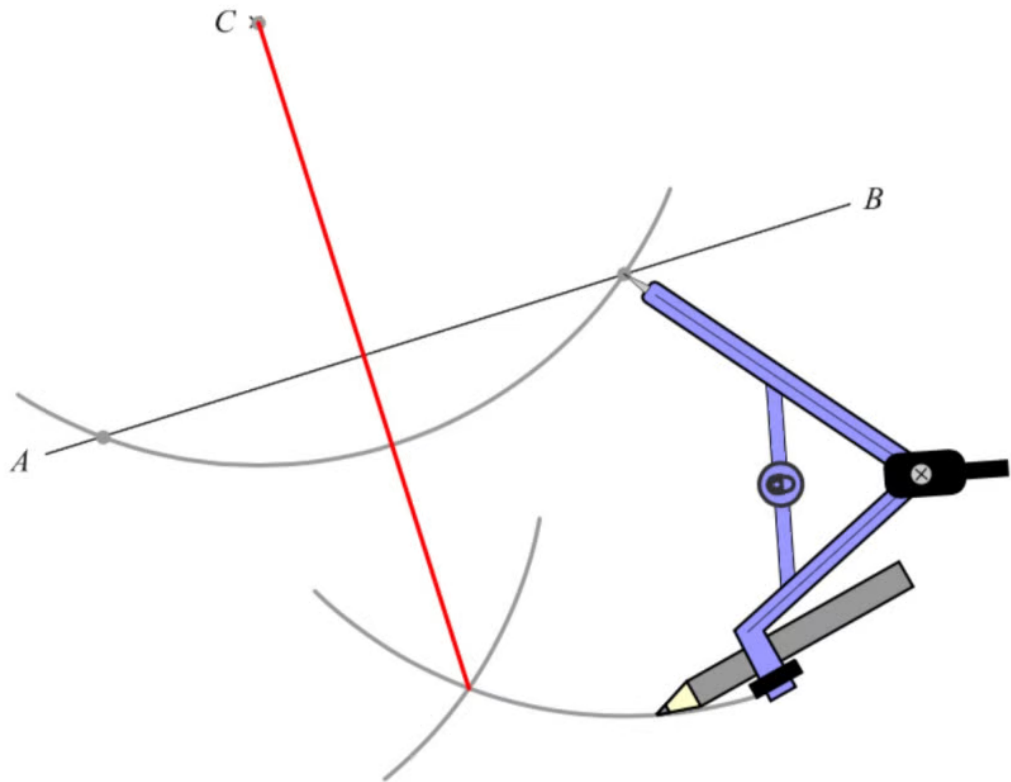
Shade the region on the map where the company can build the warehouse.

NB MY DIAGRAM MIGHT BE A SLIGHTLY DIFFERENT SIZE TO YOURS SO THE SCALE MIGHT BE A BIT OUT...



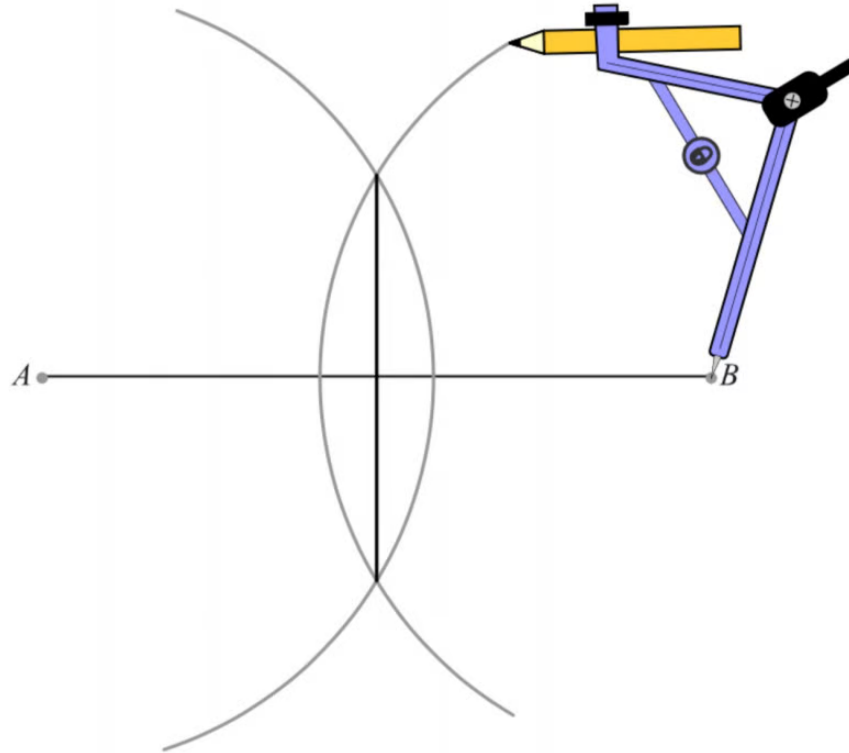
Answer 4

Use ruler and compasses to **construct** the perpendicular from point C to the line AB .
You must show all your construction lines.





Answer 5

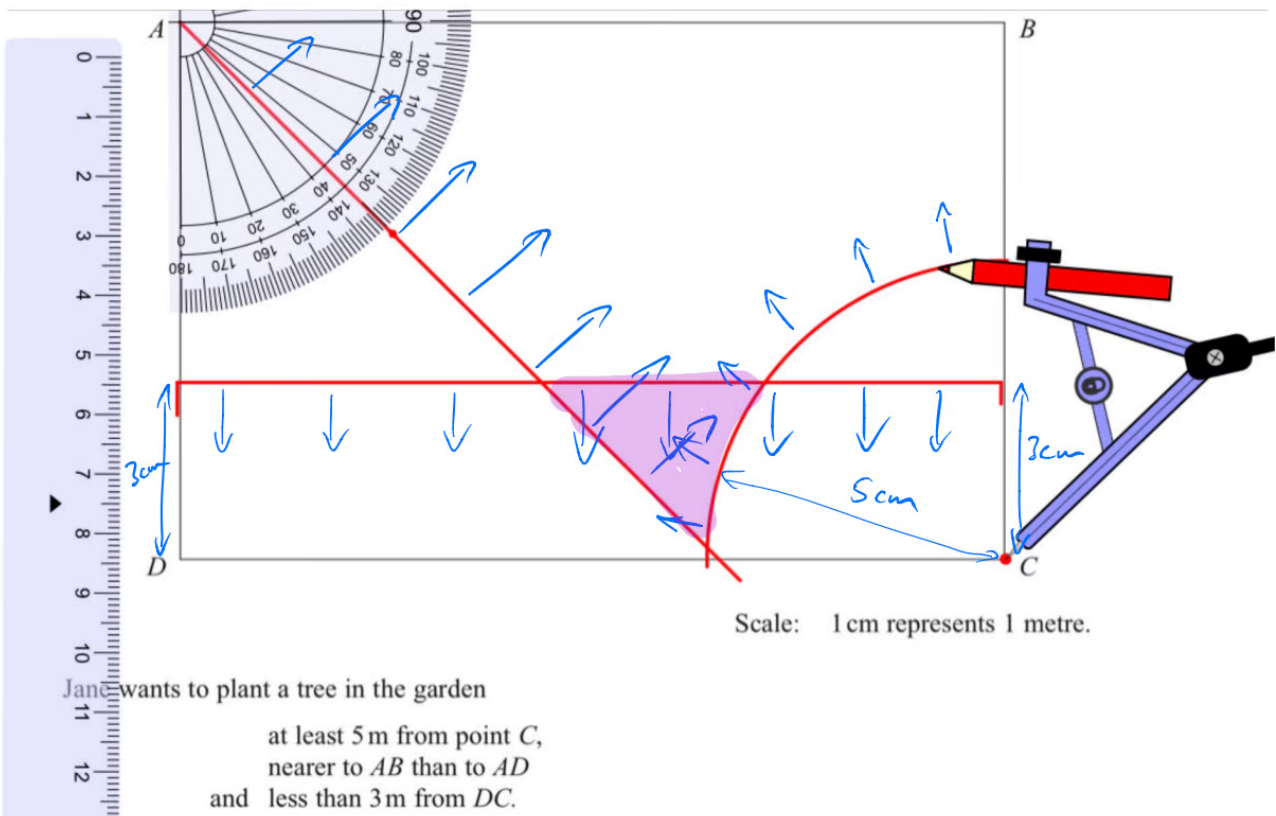


Use ruler and compasses to **construct** the **perpendicular bisector** of the line segment AB .
You must show all your construction lines.



Answer 6

Here is a scale drawing of a rectangular garden $ABCD$.

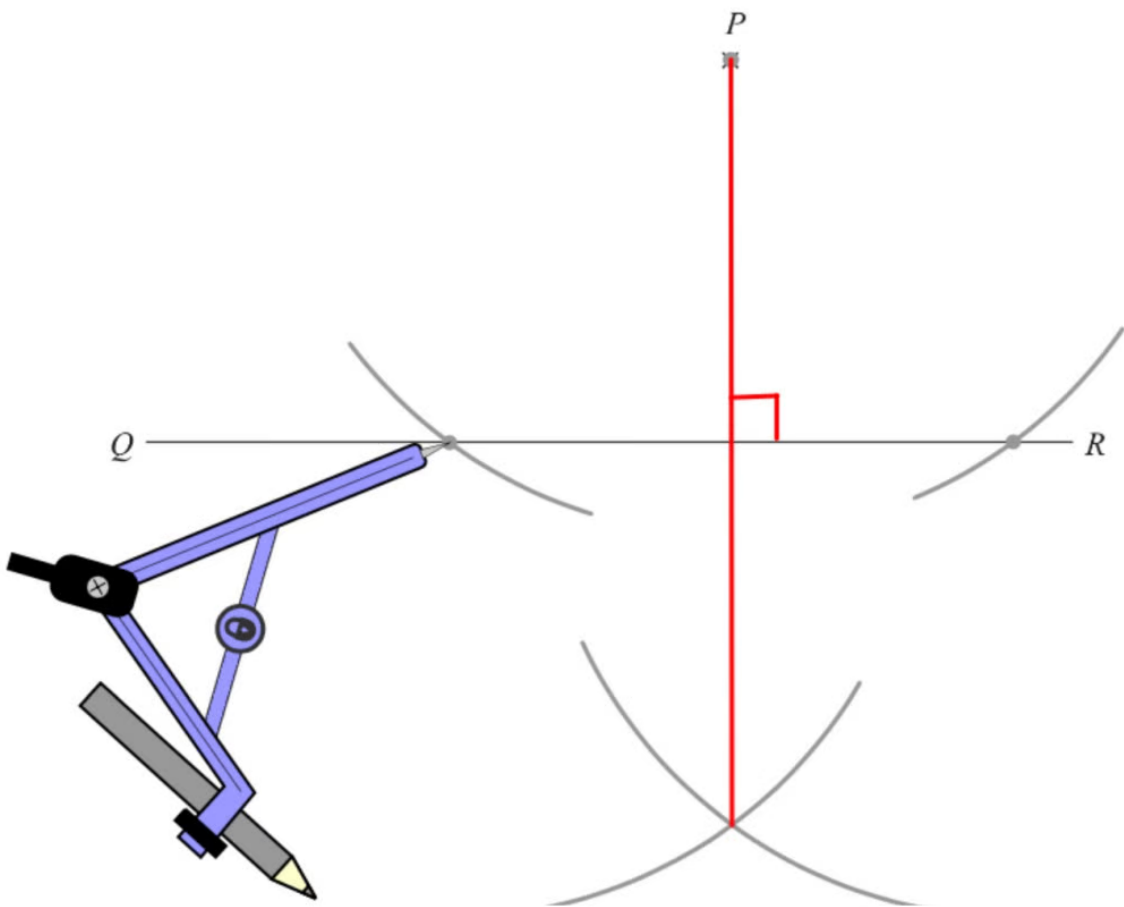


On the diagram, shade the region where Jane can plant the tree.



Answer 7

- (b) Use ruler and compasses to construct the perpendicular from the point P to the line QR .
You must show all your construction lines.

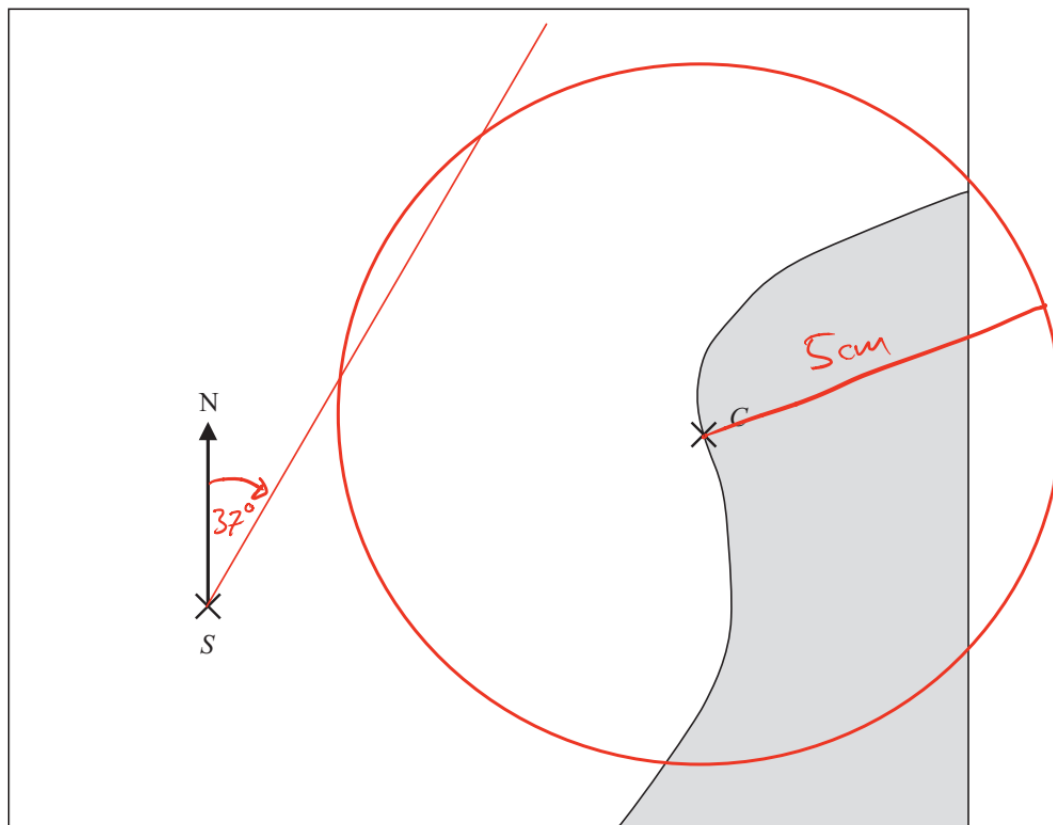




Answer 8

Here is a map.

The position of a ship, S , is marked on the map.



Scale 1 cm represents 100 m

Point C is on the coast.
Ships must not sail closer than 500 m to point C .

The ship sails on a bearing of 037°

Will the ship sail closer than 500 m to point C ?
You must explain your answer.

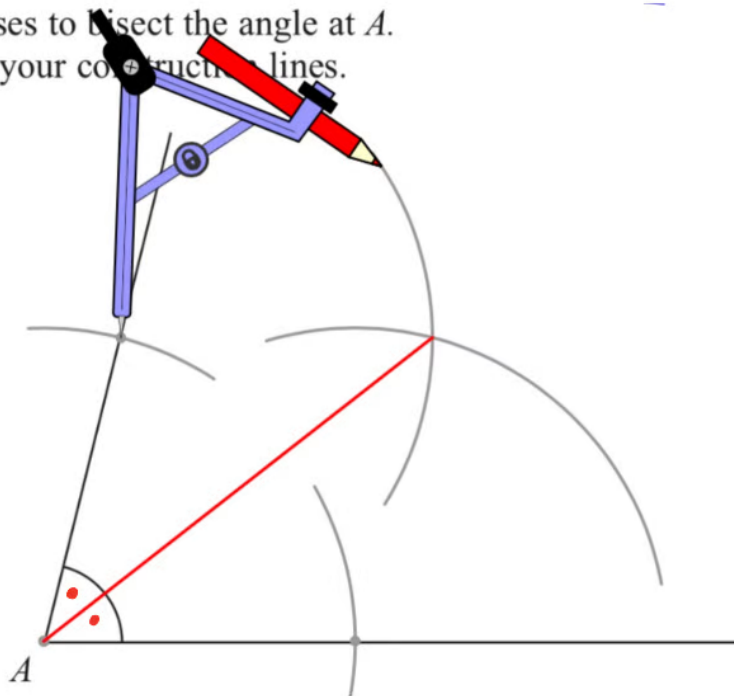
1cm : 100m } x 5
5cm : 500m

YES AS THE LINE OF THE SHIP'S COURSE GOES INSIDE THE CIRCLE OF RADIUS 500m



Answer 9

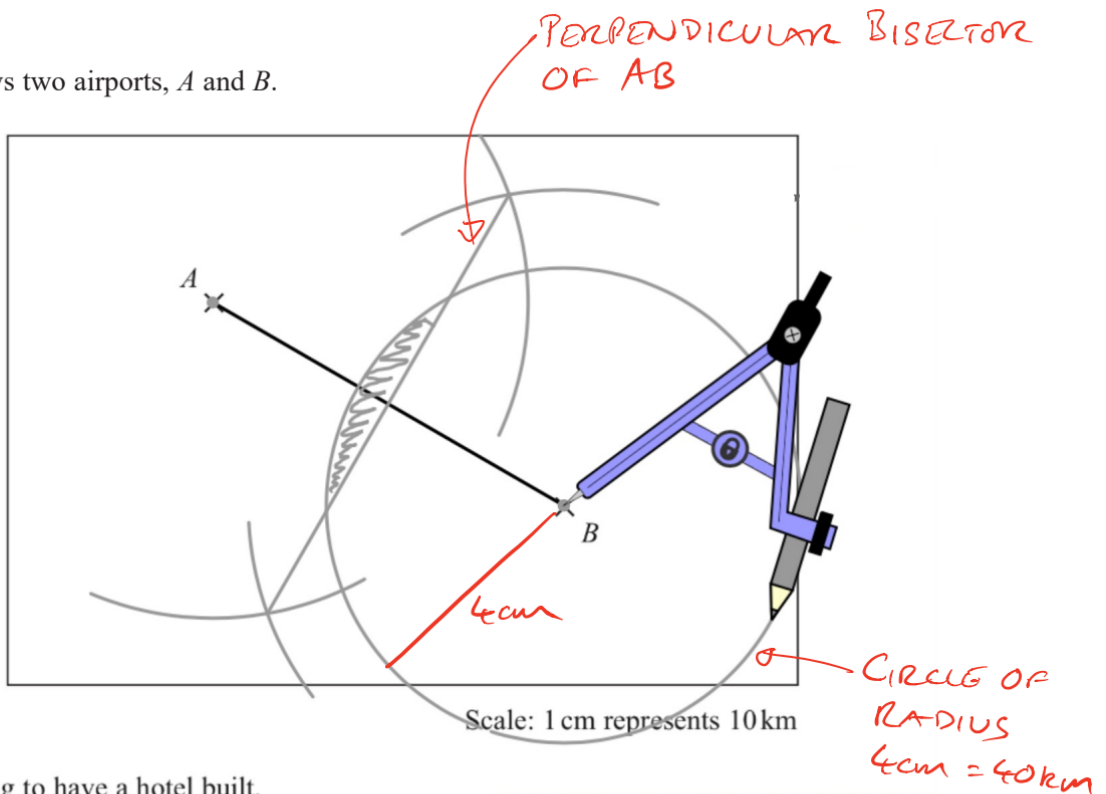
- (a) Use ruler and compasses to bisect the angle at A .
You must show all your construction lines.





Answer 10

Here is a map.
The map shows two airports, *A* and *B*.



Sophie is going to have a hotel built.

- The hotel
- will be closer to airport *A* than to airport *B*
 - will be less than 40 km from airport *B*



On the map, shade the region where the hotel can be built.

HOTEL MUST BE TO THE LEFT OF THE PERPENDICULAR BISECTOR OF AB AND INSIDE THE CIRCLE OF RADIUS 4cm (= 40km) AROUND B.