

G115 Loci problems

Q1.

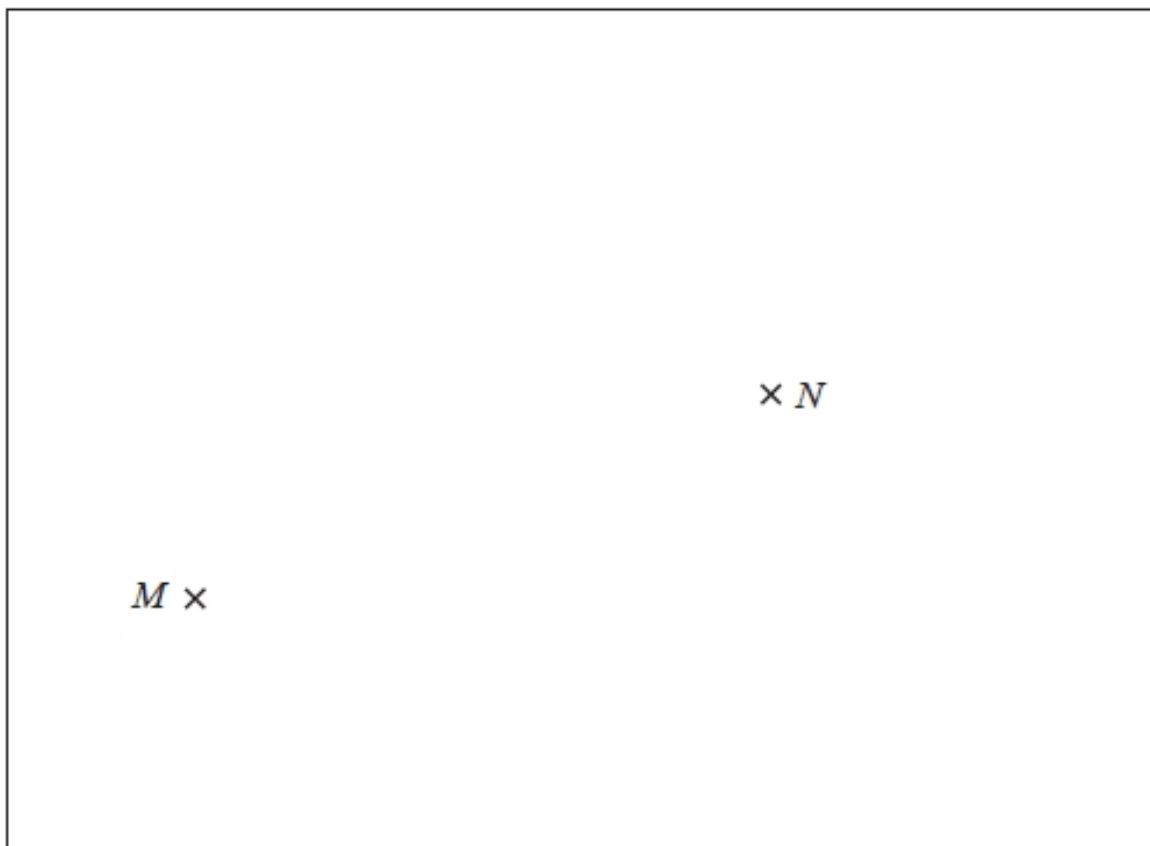
Here is a map.

The map shows two towns Marlford (M) and Newborough (N).

A company is going to build a supermarket.

The supermarket will be more than 10 km from Marlford and less than 6 km from Newborough.

Find and shade the region on the map where the company can build the supermarket.



Scale: 1 cm represents 2 km.

(Total for question = 3 marks)

Q2.

Here is a scale drawing of Gilda's garden.



Scale: 1 cm represents 1 m

Gilda is going to plant an elm tree in the garden.

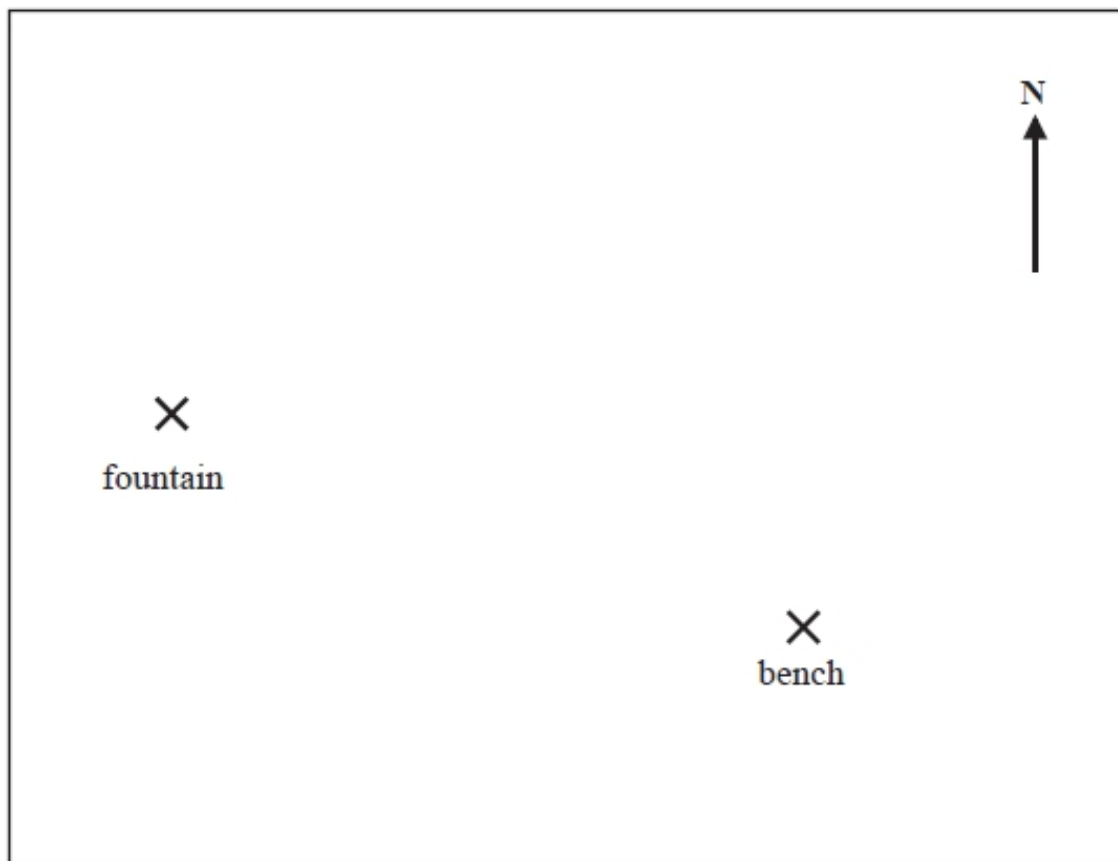
She must plant the elm tree at least 4 metres from the oak tree.

On the diagram, show by shading the region where Gilda can plant the elm tree.

(Total for Question is 2 marks)

Q3.

The diagram shows a scale drawing of a garden.



Scale: 1 centimetre represents 2 metres

(a) Work out the real distance from the fountain to the bench.

..... metres
(1)

(b) Measure the bearing of the bench from the fountain.

.....°
(2)

Haavi is going to plant a tree in the garden. The tree must be

- less than 7 metres from the fountain,
- less than 12 metres from the bench.

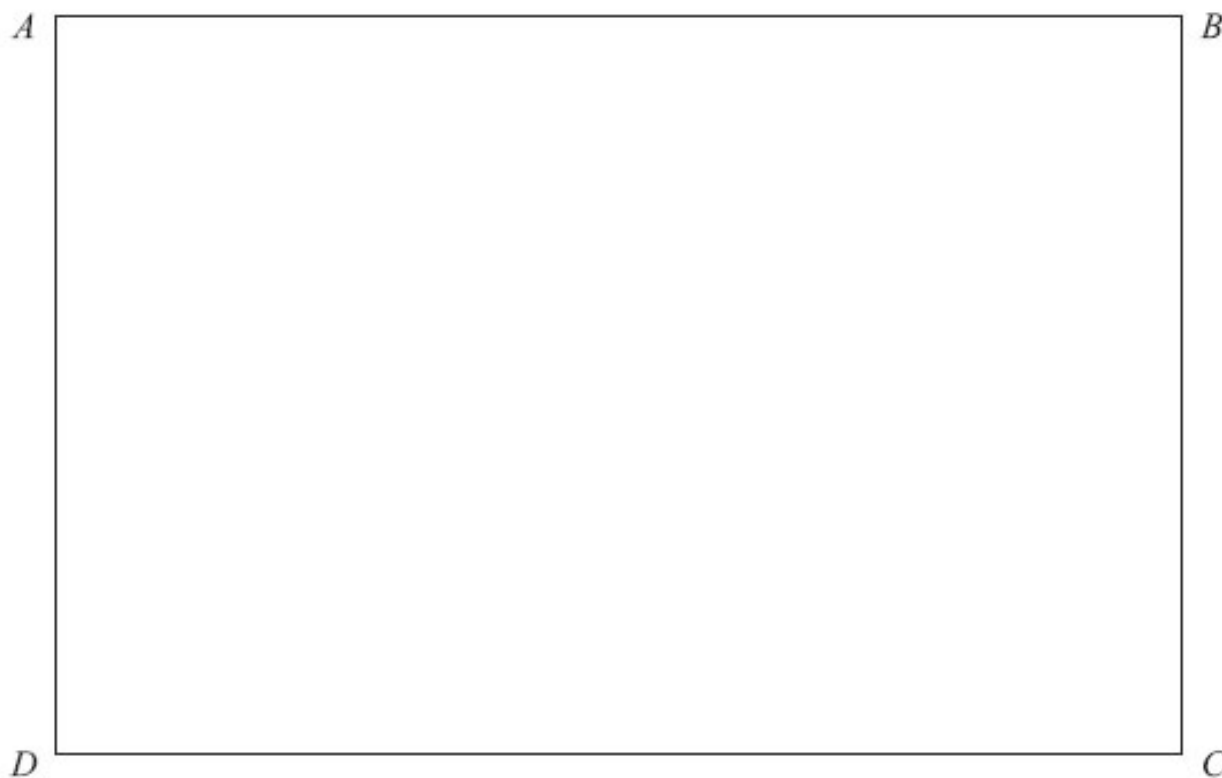
(c) On the diagram show, by shading, the region in which Haavi can plant the tree.

(3)

(Total for question = 6 marks)

Q4.

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



Scale: 1 cm represents 1 metre.

Jane wants to plant a tree in the garden

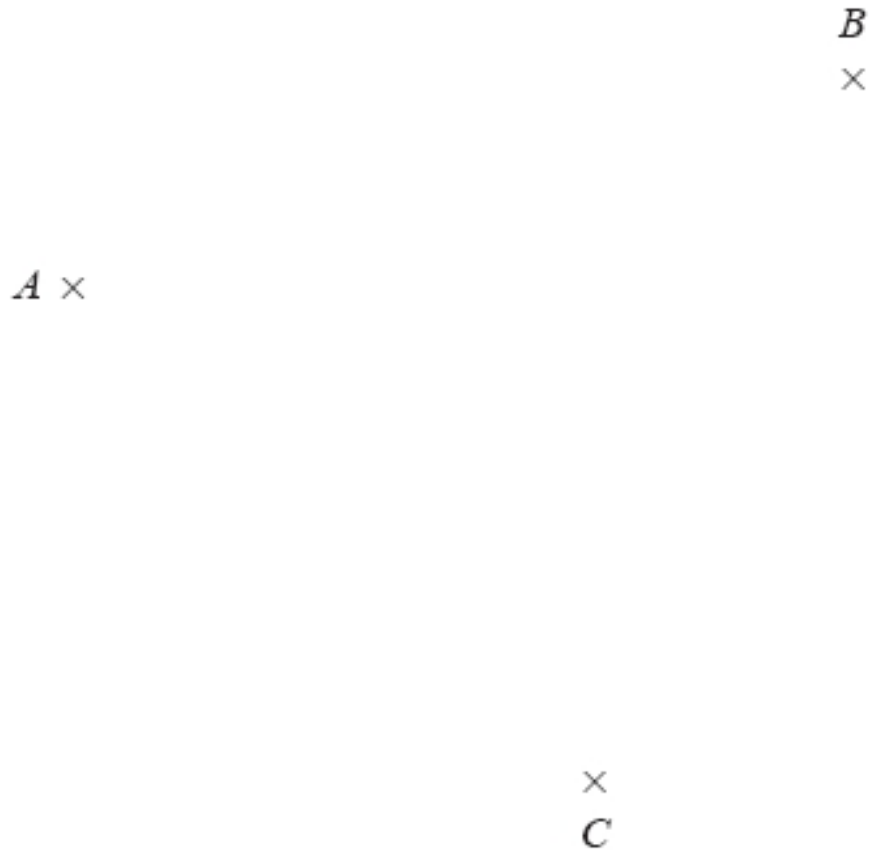
at least 5m from point C ,
nearer to AB than to AD
and less than 3m from DC .

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

(Total for Question is 4marks)

Q5.

A, *B* and *C* are three points on a map.



1 cm represents 100 metres.

Point *T* is 250 metres from point *A*.

Point *T* is equidistant from point *B* and point *C*.

On the map, show one of the possible positions for point *T*.

(Total for question = 3 marks)

Q6.

Here is a scale drawing of an office.
The scale is 1 cm to 2 metres.

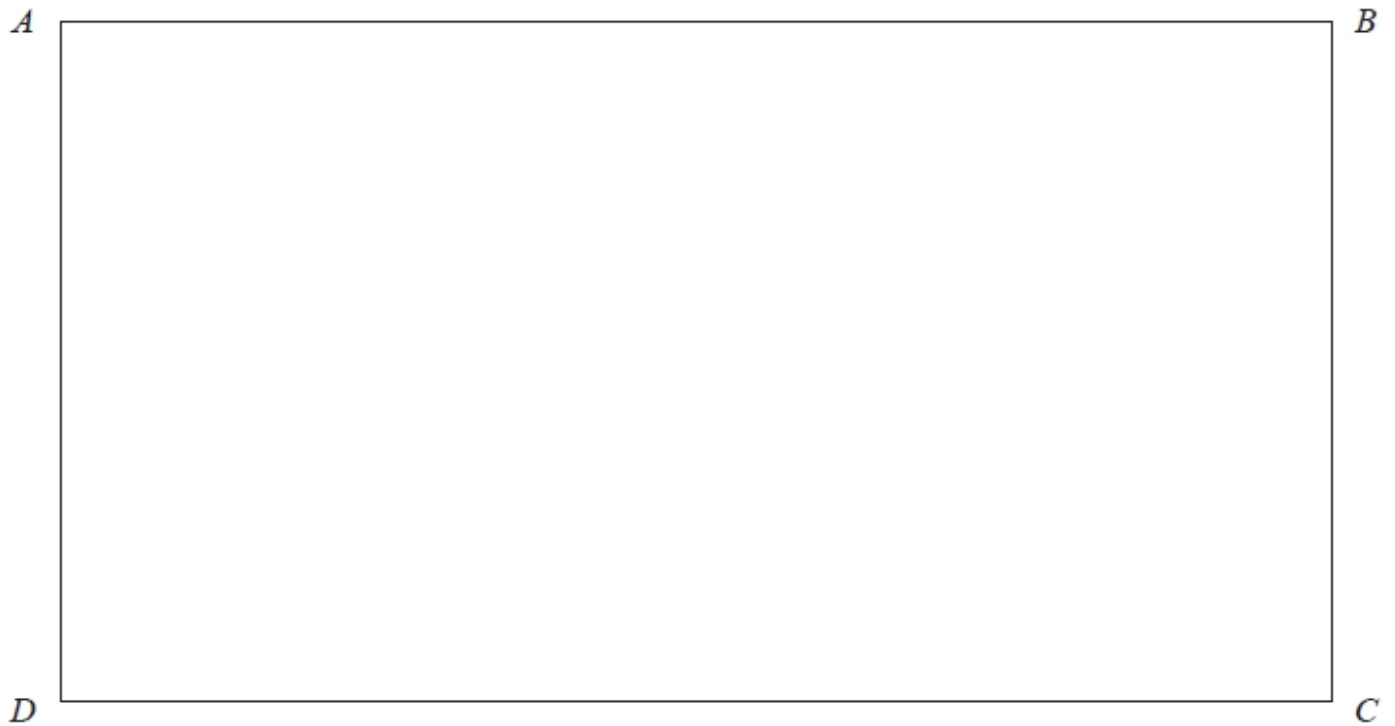


A photocopier is going to be put in the office.
The photocopier has to be closer to *B* than it is to *A*.
The photocopier also has to be less than 8 metres from *C*.
Show, by shading, the region where the photocopier can be put.

(Total for question = 3 marks)

Q7.

Here is a plan of a kitchen drawn to a scale of 1 : 30



Scale 1:30

Sam is going to put a small table in the kitchen.

The table has to be

- more than 180 cm from *A*
- more than 150 cm from *BC*

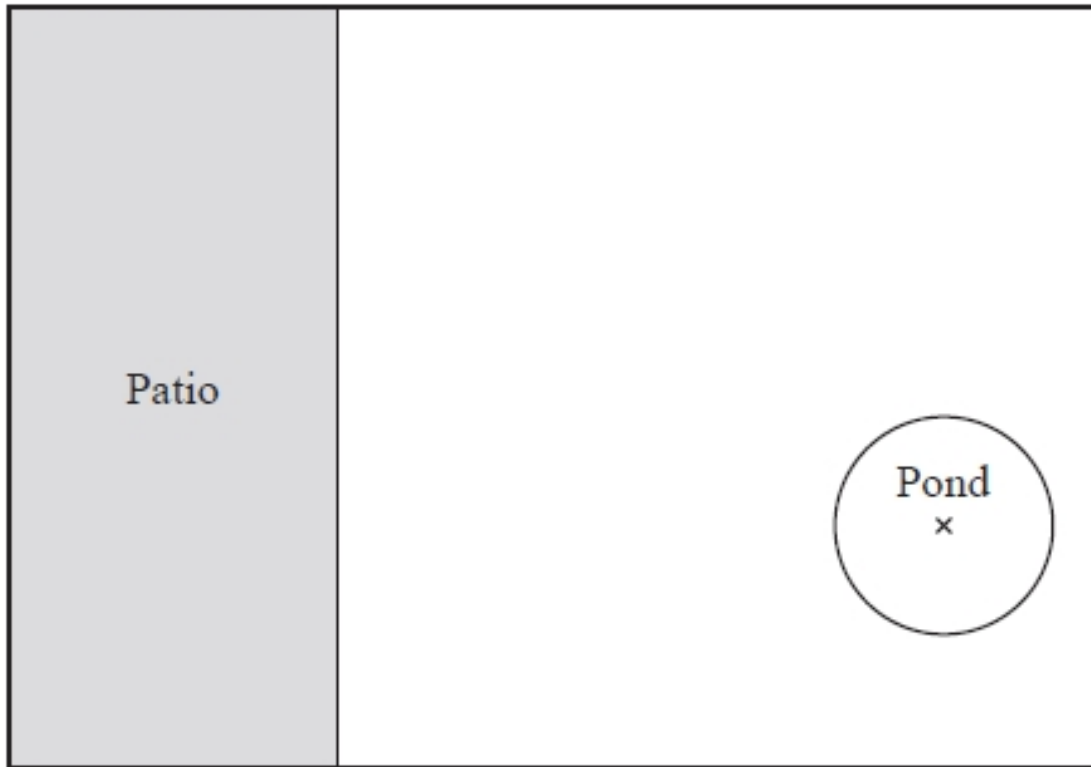
Show, by shading on the diagram, the region where Sam can put the table.

(Total for question = 4 marks)

Q8.

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

more than 3 metres from the patio

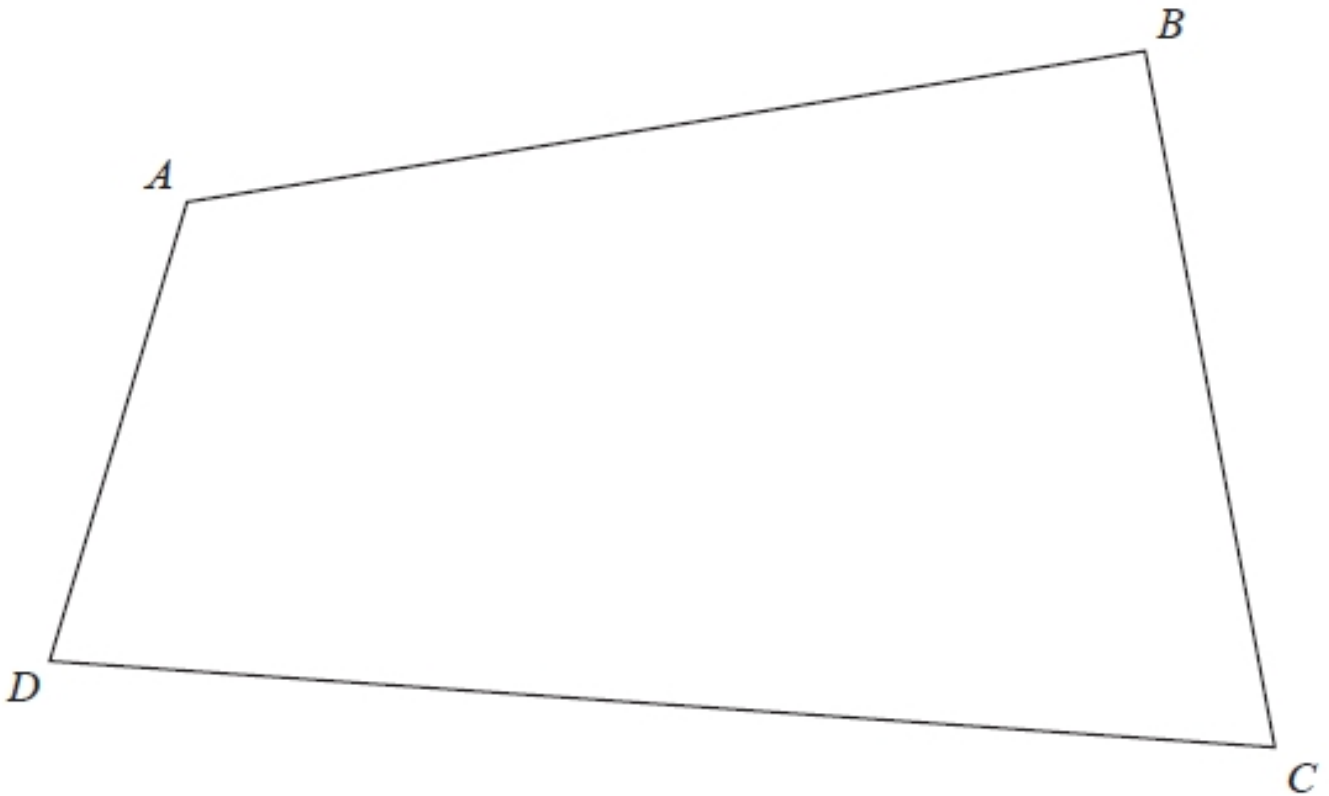
and more than 6 metres from the centre of the pond.

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

(Total for Question is 3 marks)

Q9.

The diagram shows the plan of a park.



Scale: 1 cm represents 100 m

A fountain in the park is equidistant from A and from C. The fountain is exactly 700 m from D.

On the diagram, mark the position of the fountain with a cross (×).

(Total for question = 3 marks)