

Name:

Exam Style Questions

Loci



Equipment needed: Pen, pencil, ruler, pair of compasses

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

www.corbettmaths.com/contents

Videos 75, 76, 77



Answers and Video Solutions



1. Draw the locus of all points which are equidistant from points A and B.

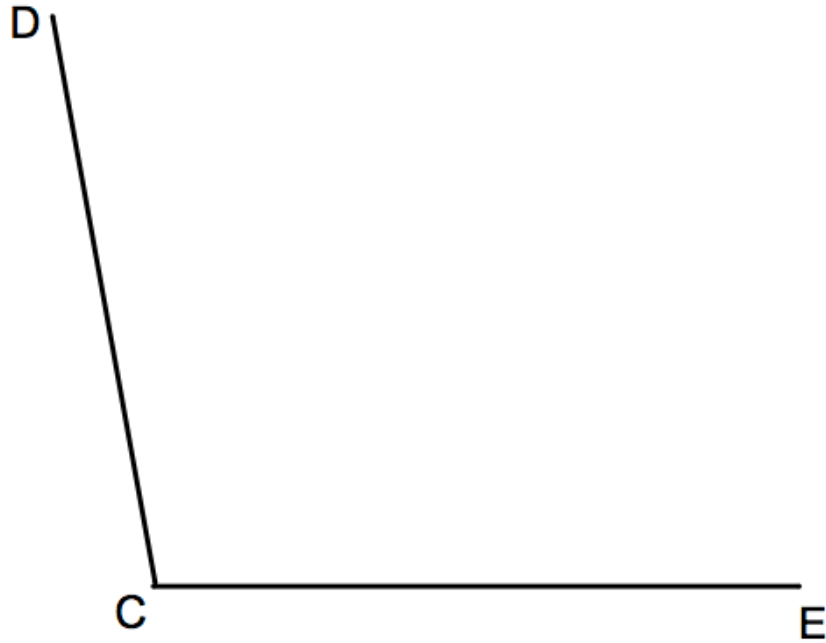


A
x

B
x

(2)

2. Draw the locus of all points which are equidistant from lines CD and CE.



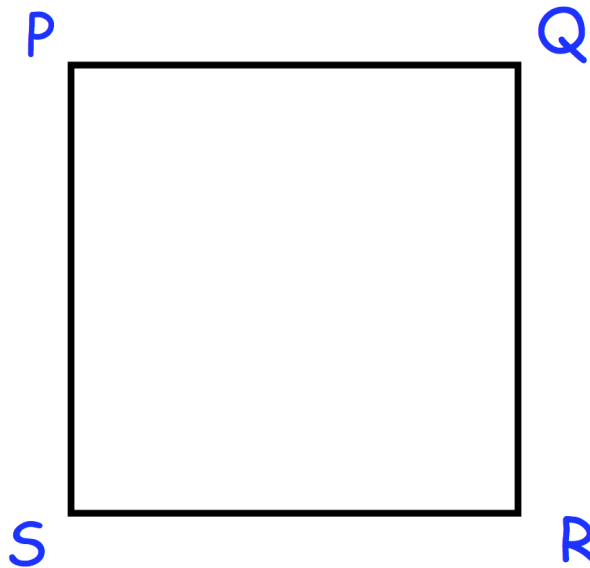
(2)

3. Draw the locus of all points 3cm from the line below.



(3)

4. PQRS is a square.



Shade the region in the square that is

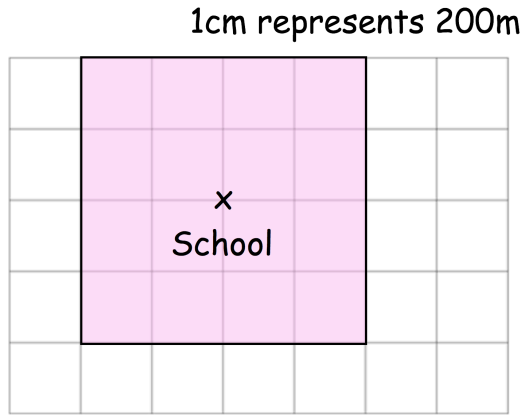
less than 4cm from PS and less than 2cm PQ.

(2)

5. A bus station is within 400 metres of a school.



Edward has drawn the diagram below to show the possible locations of the bus station.



Is Edward's diagram correct?
Explain your answer.

.....

.....

.....

(2)

6. A and B are two points.



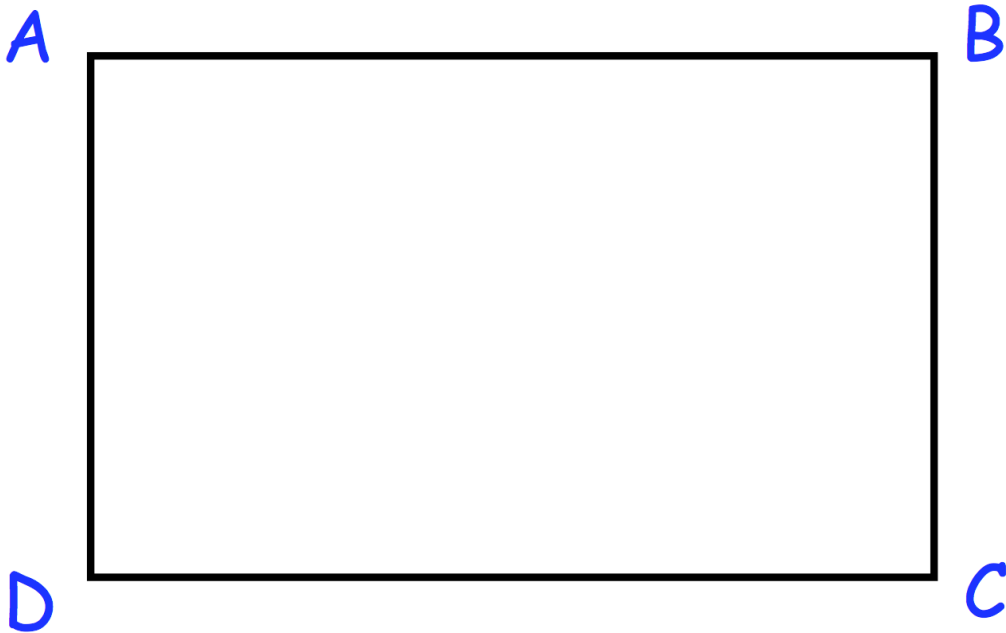
A
x

B
x

Shade the region which contains those points which are both closer to A than to B, and less than 5cm from B.

(2)

7. ABCD is a rectangle

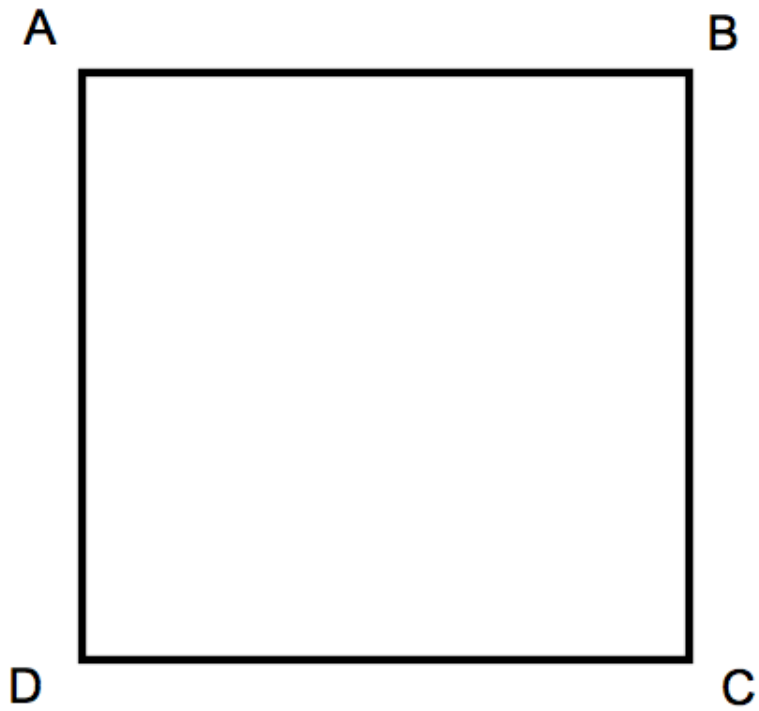


Shade the region inside ABCD that is

less than 3cm from the line AB and more than 9cm from the point C

(3)

8. ABCD is a rectangle.



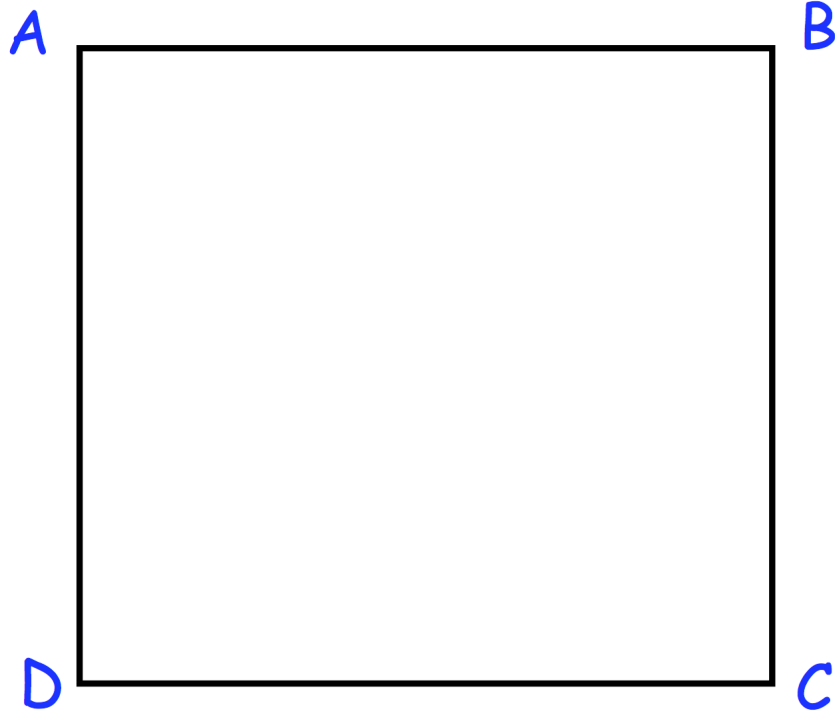
Shade the region inside the rectangle, which is closer to AD than DC, and less than 4cm from D.

(3)

9. Shown below is a field, ABCD.



1cm represents 20m



A golf ball lands in the field such that

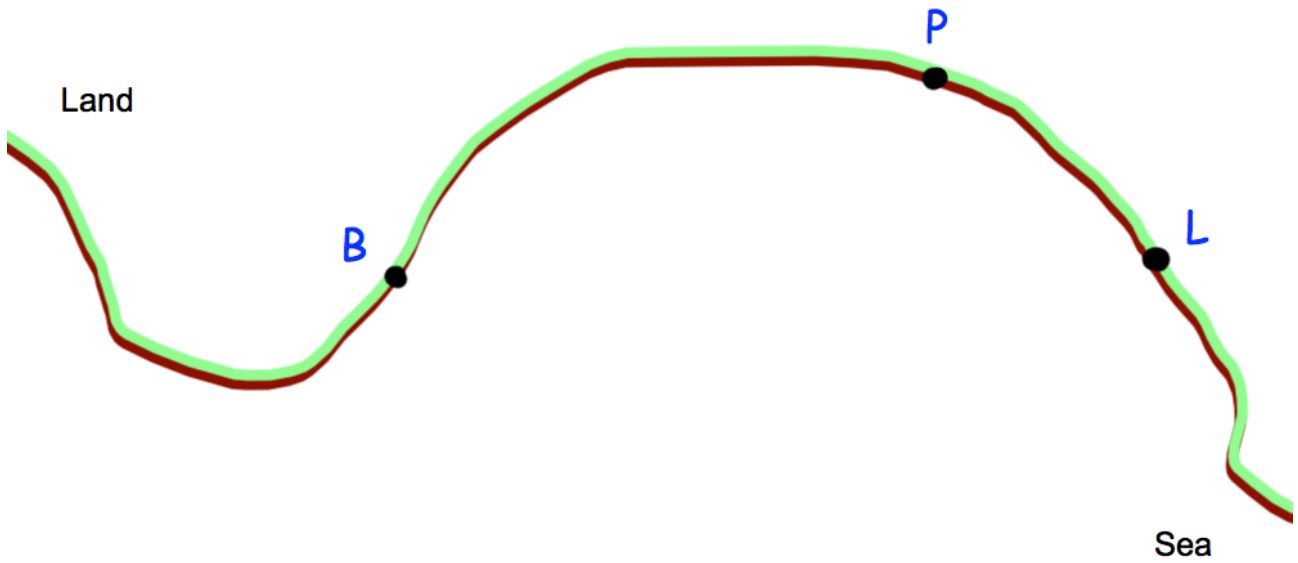
it is closer to A than C

it is exactly 110m from B and 160m from D.

Show on the diagram where the ball lands.

(3)

10.



A yacht leaves the port, P, on a course that is an equal distance from PB and PL.

Using ruler and compasses only, construct the course on the diagram.

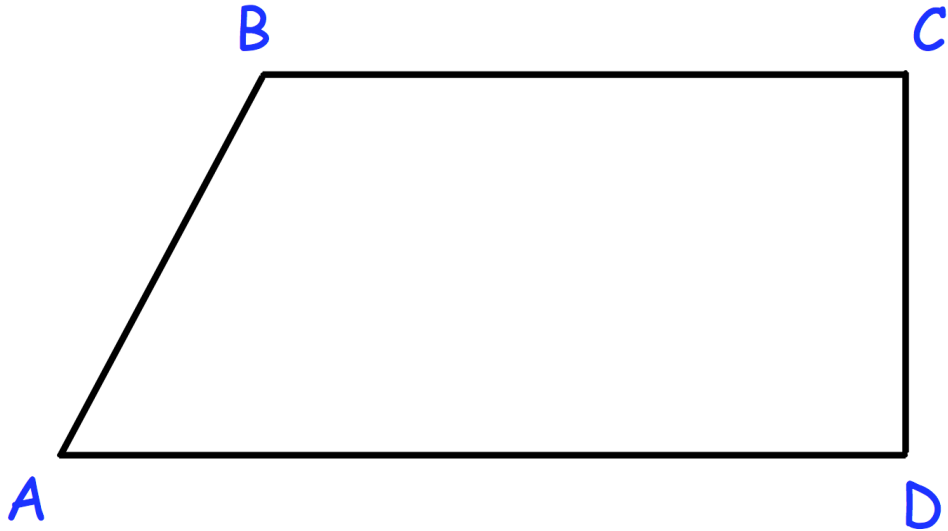
You must show your construction arcs.

(2)

11. Here is a diagram of Henry's garden.



1cm represents 4m



Henry is going to place a sundial in his garden such that

it is closer to AD than AB

it is less than 28m from B

Shade the region on the diagram where Henry can put the sundial.

(4)

12. Below is a diagram of a hall.

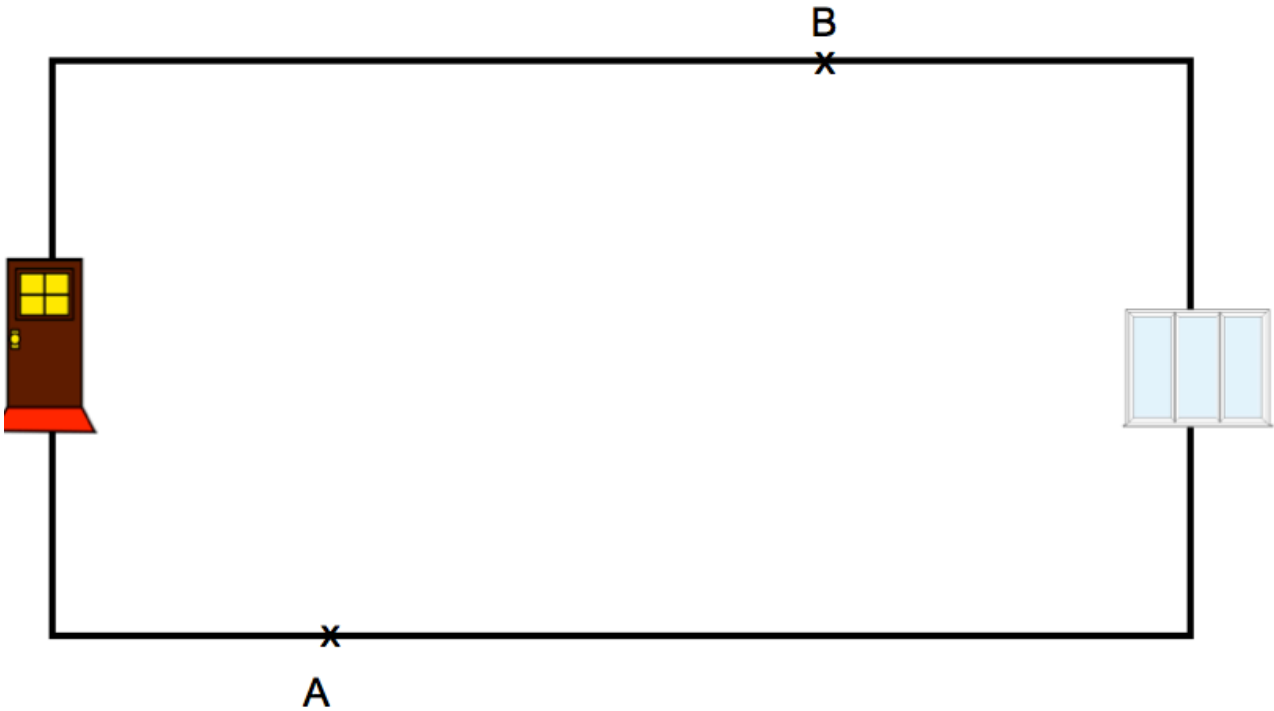


There is a front door at one end of the hall and a patio door at the other.

There are two burglar alarm sensors, one at A and one at B.

The range of each sensor is 4m.

1cm = 1 metre



The alarm is switched on.

Is it possible to walk from the front door to the patio door without setting off the alarm?

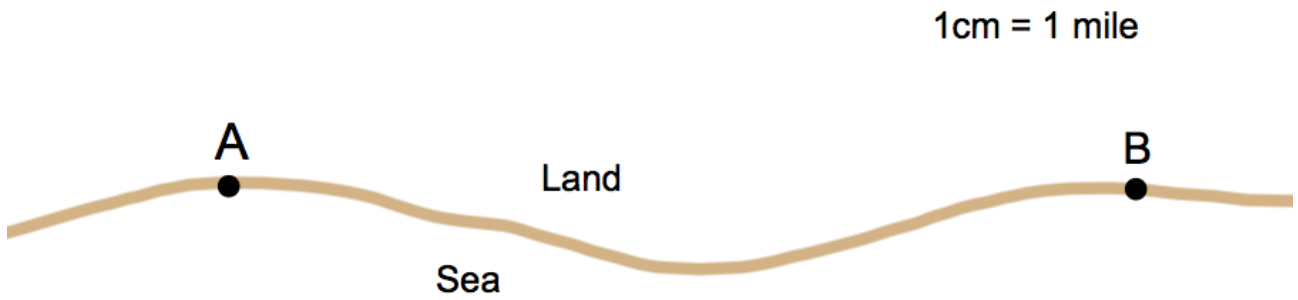
.....
(3)

13. The diagram shows two lighthouses.



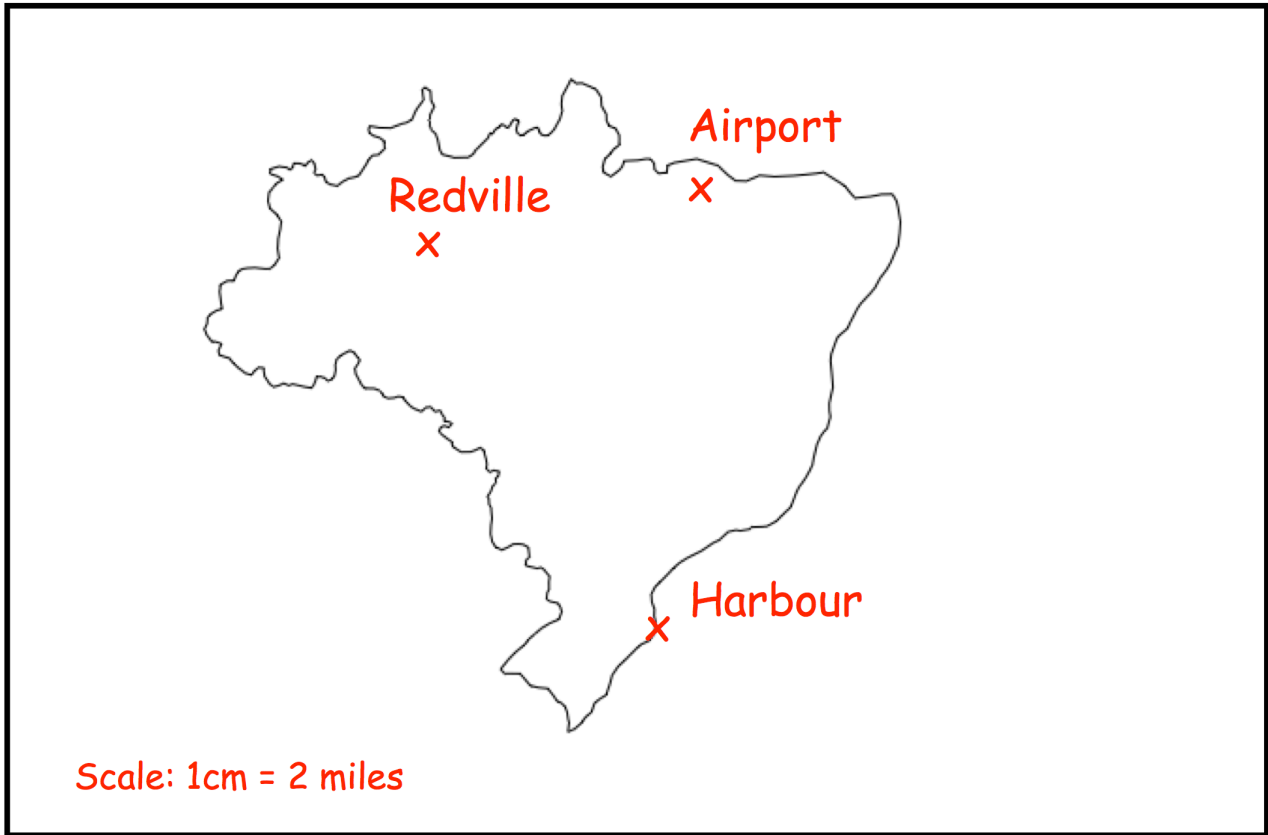
A boat is within than 8 miles of lighthouse A.
The same boat is within 6 miles of lighthouse B.

Shade the possible area in which the boat could be.



(2)

14. Shown below is the map of an island.



A recycling centre is going to be built such that it is

closer to the harbour than to Redville.

between 8 and 12 miles from the airport.

Show the region where the recycling centre can be built.

(4)

15. A phone box is located near three houses, A, B and C.



1cm = 200m

Railway



A •

• B

•
C

The phone box is less than 500m from the railway track.
The phone box is between 300m and 500m from house A.
The phone box is closer to house C than house B.

Shade the region on the map where the phone box could be located.

(5)