



Aberdare Community School
Mathematics Department

WJEC GCSE

Higher – Non Calculator
Shape

Loci

Name:

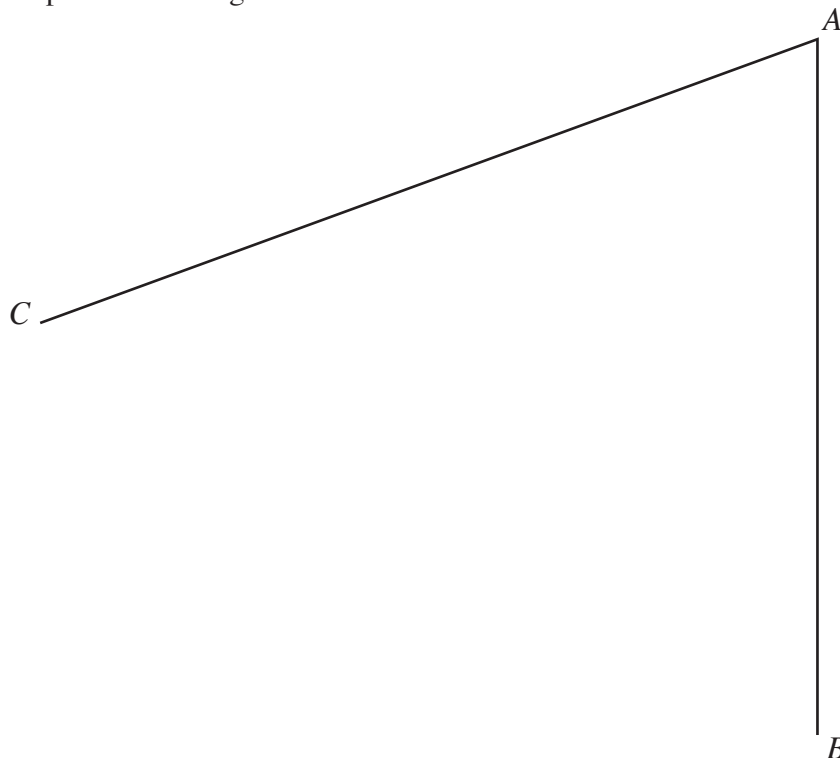
Set:

Date:

Teacher:

10. (a) The diagram below shows two straight lines AB and AC . Find and **shade** the region which satisfies **both** of the following conditions.

- (i) All points in the region are nearer to AC than to AB .
- (ii) All points in the region are less than 6 cm from B .



10. In the following diagram, shade the region which satisfies **all** of the following conditions.

The distance from AD is greater than the distance from DC .

The distance from D is less than the distance from C .

The distance from A is less than 7 cm.

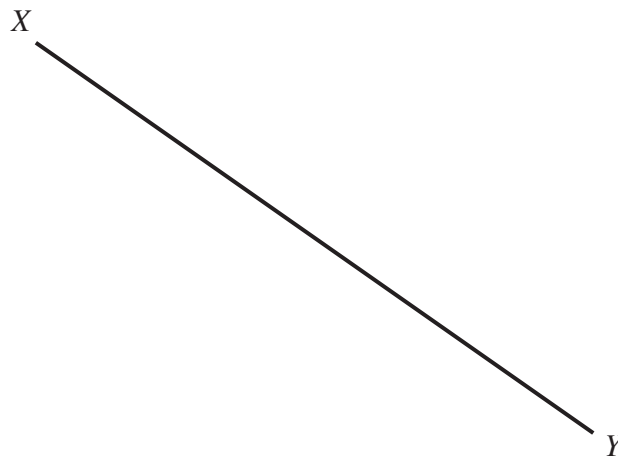
[4]



11. Shade the region that satisfies both of the following conditions.

- (i) The points are less than 7 cm from X .
- (ii) The points are nearer to Y than to X .

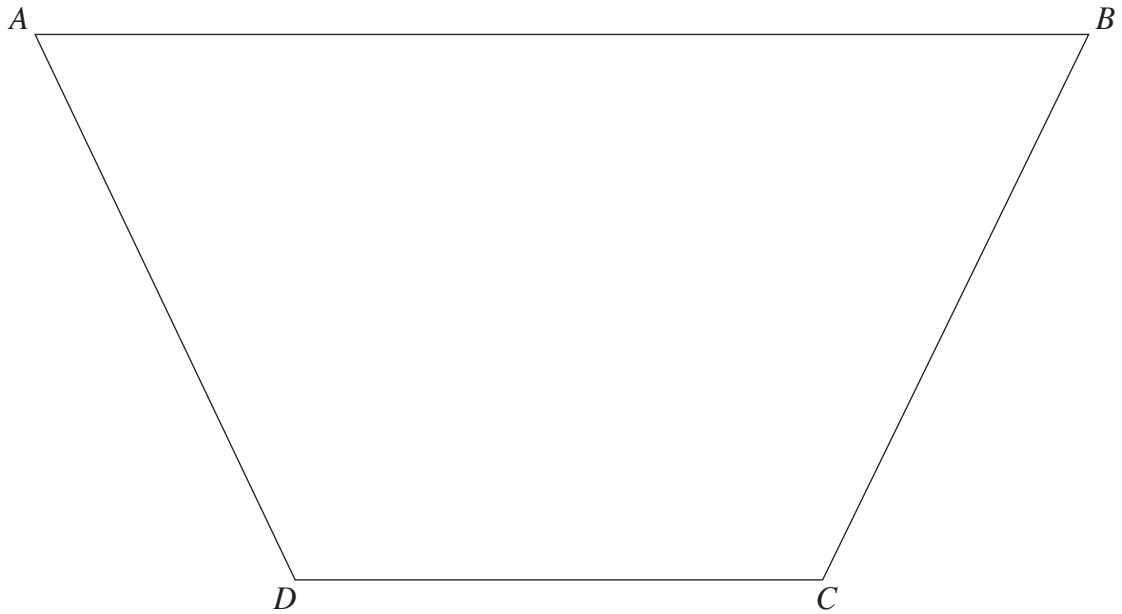
[3]



11. Find and shade the region of points inside the trapezium $ABCD$ that satisfy **both** of the following conditions.

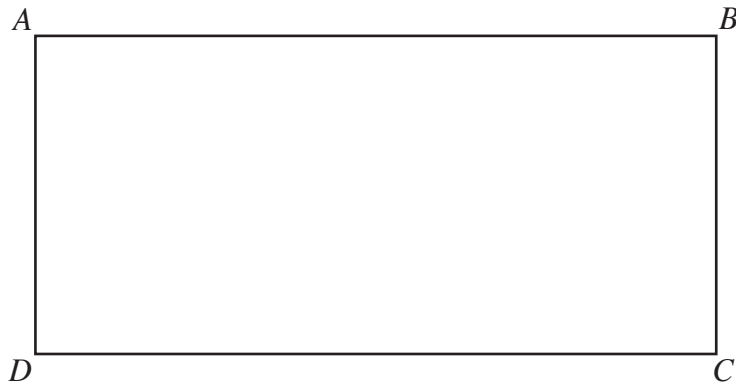
- (i) The points are nearer to AD than to DC .
- (ii) The points are further than 3 cm from the line AB .

[3]



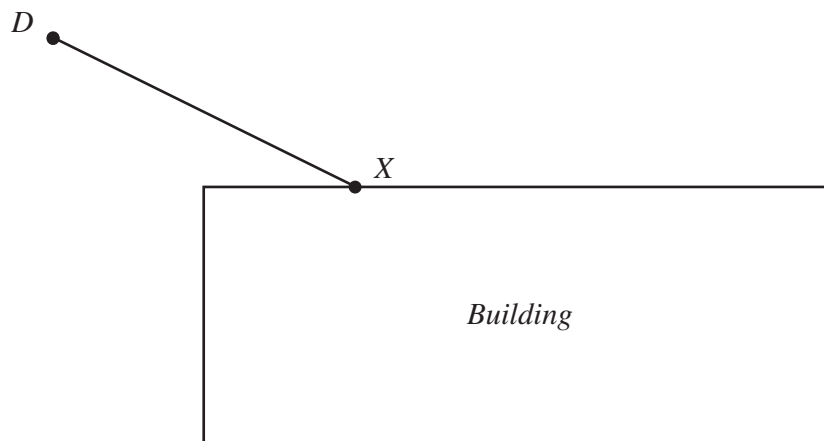
6. Find and shade the region of points within the rectangle $ABCD$ that satisfy **both** of the following conditions.
- The points are nearer to the line AB than to the line DC .
 - The points are less than 6 cm from the point A .

[3]



8. The diagram represents an aerial view of a building.
A dog, D , on a lead is tied to a side of the building at X .
Draw the boundary of the region in which the dog can roam.

[3]

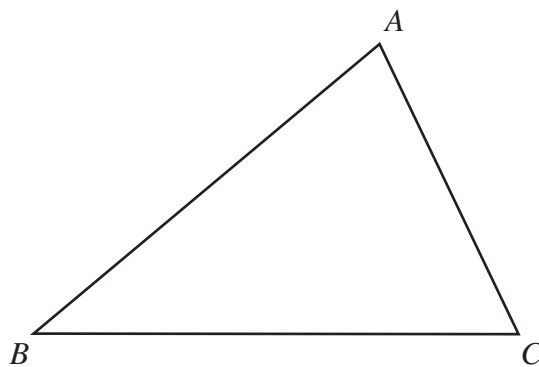


5.

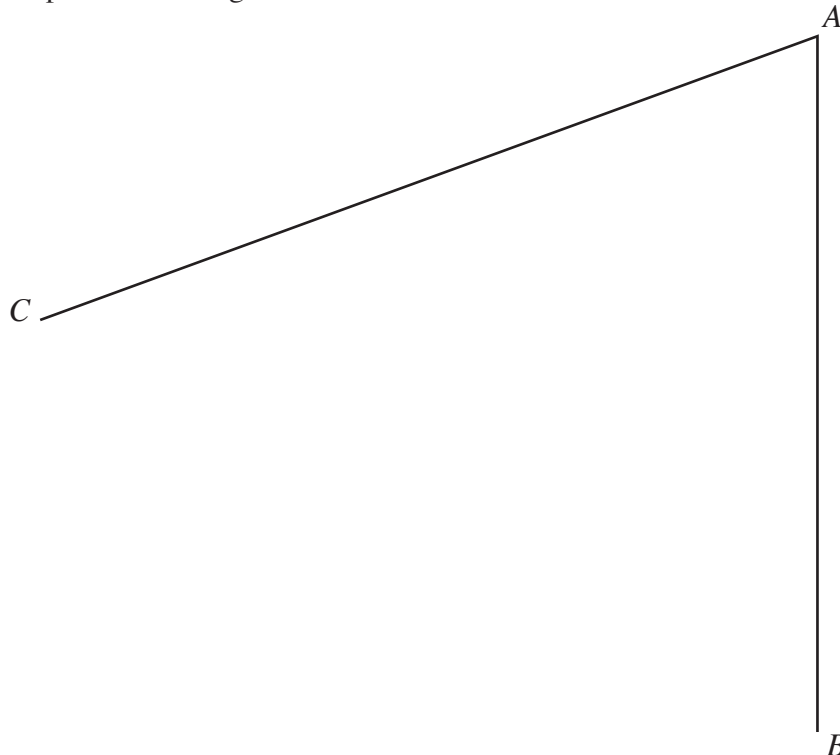
(b) Find and shade the region of points inside triangle ABC that satisfy both the following conditions.

- (i) The points are nearer to BC than to AB .
- (ii) The points are less than 5 cm from B .

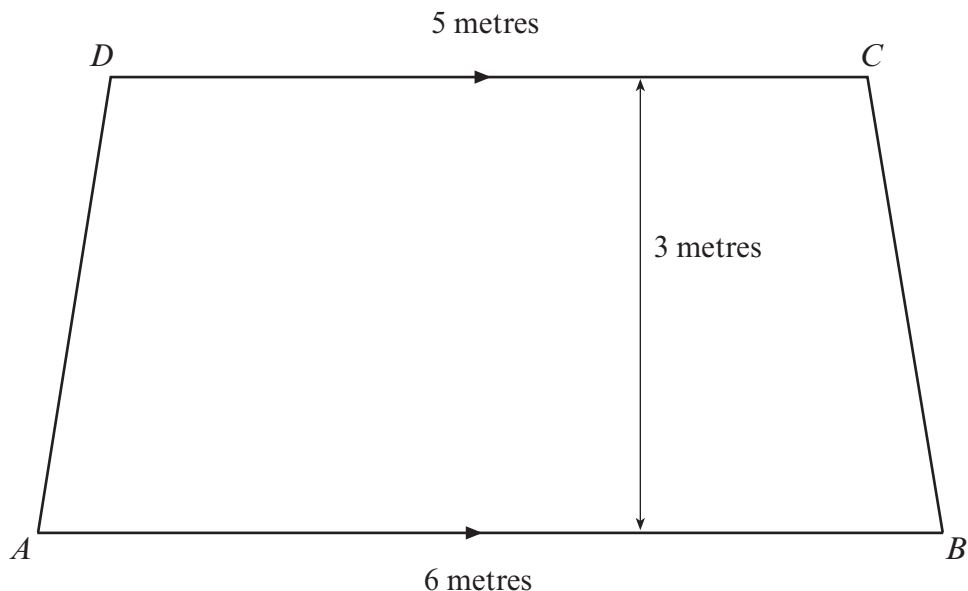
[3]



9. (a) The diagram below shows two straight lines AB and AC . Find and **shade** the region which satisfies **both** of the following conditions.
- All points in the region are nearer to AC than to AB .
 - All points in the region are less than 6 cm from B .



7. Rhian decides to plan her garden with a lawn in the shape of a trapezium. A scale drawing of the lawn is shown below.



- (a) Write down the scale of the diagram by completing the following sentence. State the unit that you use.

1 cm represents

[1]

- (b) Rhian decides to plant a tree. The tree is to be planted so that it is 3 metres from the corner *A* **and** the same distance from *AB* as it is from *DC*. Clearly mark the point where the tree should be planted on the scale drawing.

[3]

- (c) Calculate the area of Rhian's lawn.

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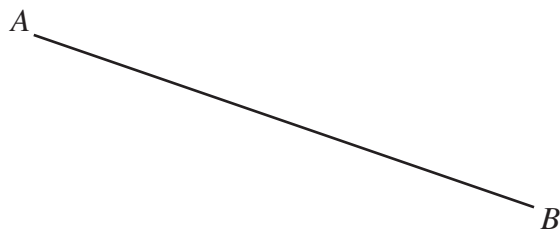
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[2]

7. Shade the region that satisfies both of the following conditions.

- (i) The points are less than 4.5 cm from A .
- (ii) The points are nearer to B than to A .

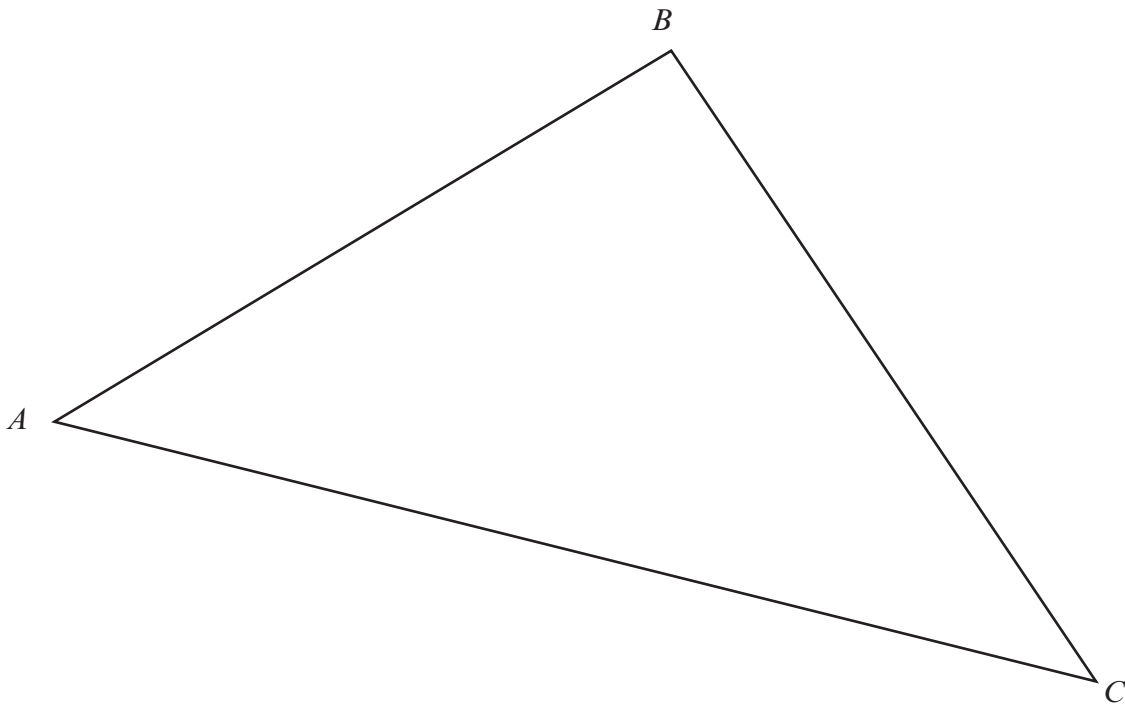
[3]



7. Find and shade the region of points inside triangle ABC that satisfy both of the following conditions.

- (i) The points are nearer to AC than to AB .
- (ii) The points are greater than 5 cm from A .

[3]



6. Find and shade the region of points that satisfy **both** of the following conditions.

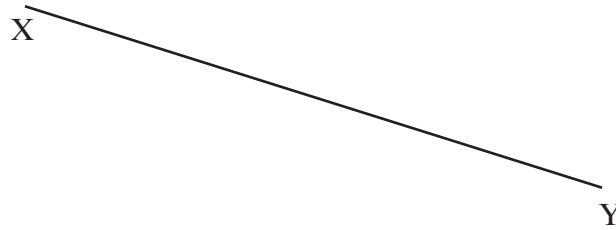
- The points are nearer to B than to A .
- The points are less than 8 cm from A .

[3]



6. (a) Shade the region that satisfies both of the following conditions.
- (i) The points are less than 5 cm from X .
 - (ii) The points are nearer to Y than to X .

[3]



(b)

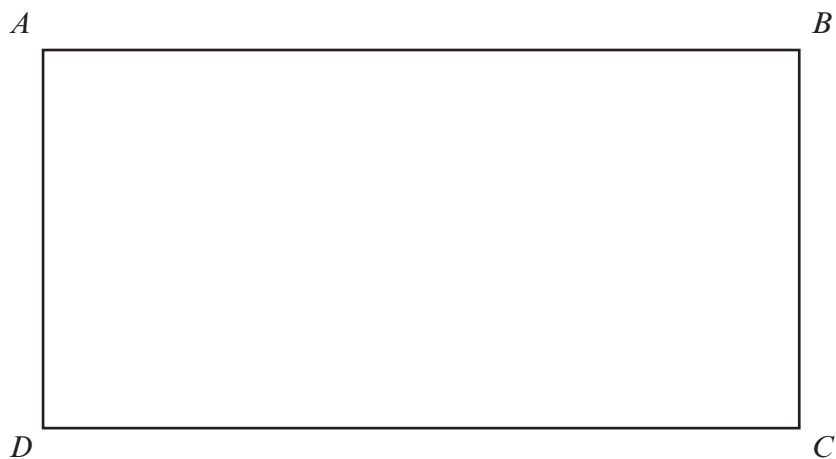


6.

(b) Find and shade the region of points within the rectangle $ABCD$ that satisfy **both** of the following conditions.

- The points are nearer the line AB than the line DC .
- They are less than 6 cm from the point C .

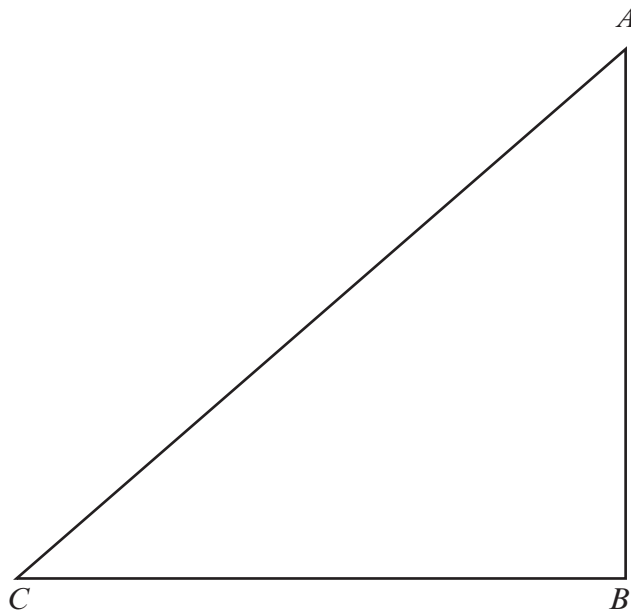
[3]



[2]

(d) The diagram below shows a triangle ABC . Find and **shade** the region inside the triangle which satisfies **both** of the following conditions.

- (i) All points in the region are nearer to AC than to AB .
- (ii) All points in the region are less than 5 cm from A .



[3]