



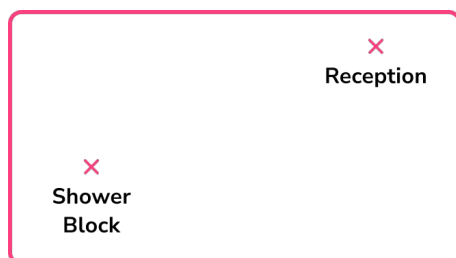
THIRD SPACE
LEARNING

GCSE Exam Questions

Loci | Geometry & Measure

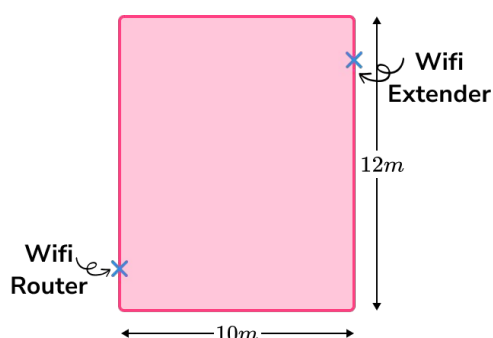
GCSE Exam Questions: Loci

- 1) A campsite needs to install a new water tap. It must be closer to reception than the shower block, but within 30 metres of the shower block. Using a scale of 1 *cm* to 5 metres. Indicate the region where the water tap can be installed.



(3marks)

- 2) The diagram shows positions of a wifi router and wifi extender in a floor plan of a single storey house. The wifi router has a range of 8 metres and the wifi extender has a range of 6 metres. Show on the diagram the regions where the wifi router and wifi extender do not reach. Use a scale of 1cm to 2 metres.



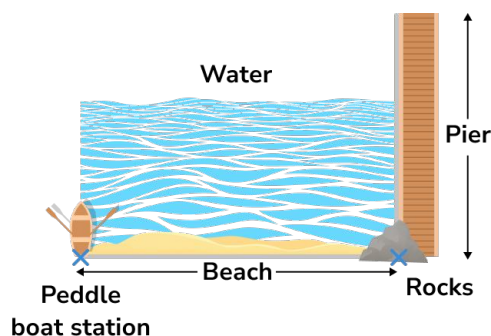
(3 marks)

GCSE Exam Questions: Loci

- 3) The diagram shows the plan of a beach and pier. The town's council wants to section off some areas of the beach and water for activities and safety. They plan to use floating ropes to mark the areas that are safe for swimming and the areas that are for peddle boats only.

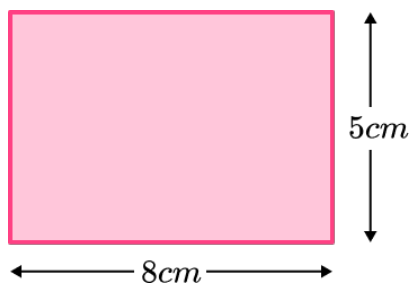
Swimmers must stay 20 metres away from the rocks and be closer to the beach than the pier.
They must also stay 30 metres away from the boat station.

Show on the diagram, using a scale of 1 *cm* to 10 metres, the region that is safe for swimmers.



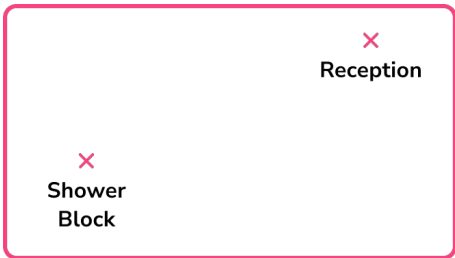
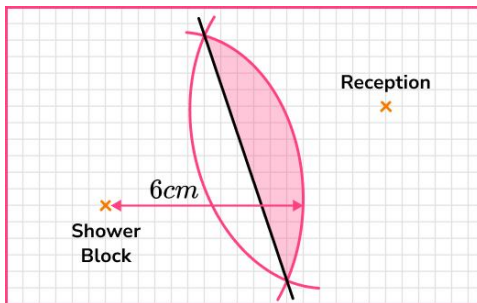
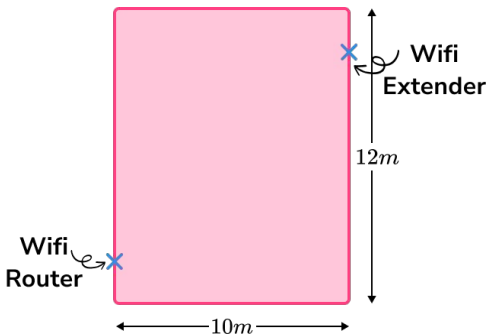
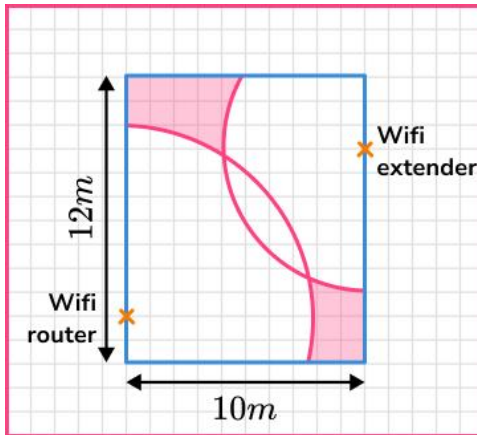
(4 marks)

- 4) The diagram shows a rectangle. On the diagram draw the locus of the points that are 2 *cm* from the perimeter of the rectangle.

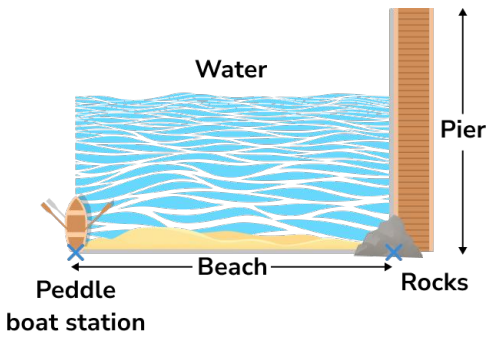
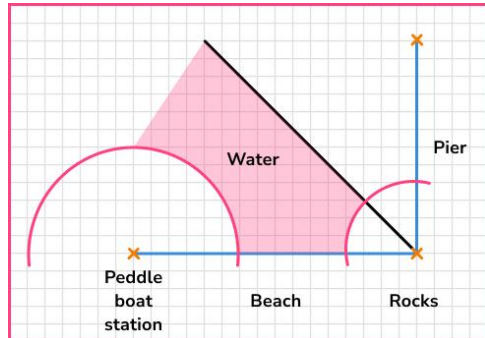
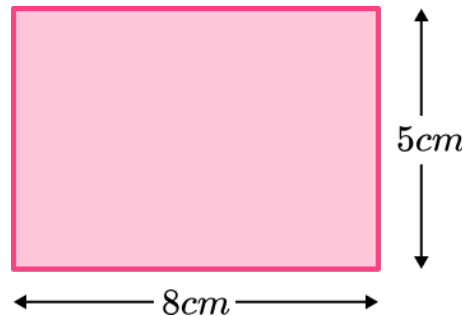
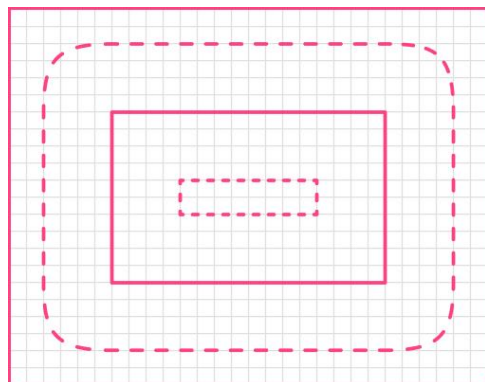


(3 marks)

GCSE Exam Questions: Loci Answers

	Question	Answer	Marks
1)	<p>A campsite needs to install a new water tap. It must be closer to reception than the shower block, but within 30 metres of the shower block. Using a scale of 1 <i>cm</i> to 5 metres. Indicate the region where the water tap can be installed.</p> 	<p>Perpendicular bisector drawn Circle radius 6 <i>cm</i> drawn with shower block as the centre Correct region indicated/shaded</p> 	<p>(1) (1) (1)</p>
2)	 <p>The diagram shows positions of a wifi router and wifi extender in a floor plan of a single storey house. The wifi router has a range of 8 metres and the wifi extender has a range of 6 metres. Show on the diagram the regions where the wifi router and wifi extender do not reach. Use a scale of 1 <i>cm</i> to 2 metres.</p>	<p>Circle radius 4 <i>cm</i> around wifi router Circle radius 3 <i>cm</i> around wifi extender Correct regions indicated/shaded</p> 	<p>(1) (1) (1)</p>

GCSE Exam Questions: Loci Answers

	Question	Answer	Marks
3)	<p>The diagram shows the plan of a beach and pier. The town's council wants to section off some areas of the beach and water for activities and safety. They plan to use floating ropes to mark the areas that are safe for swimming and the areas that are for peddle boats only.</p> <p>Swimmers must stay 20 metres away from the rocks and be closer to the beach than the pier. They must also stay 30 metres away from the peddle boat station. Show on the diagram, using a scale of 1cm to 10 metres, the region that is safe for swimmers.</p> 	<p>Circle radius 2 cm around rocks</p> <p>Circle radius 3 cm around peddle boat station</p> <p>Correct angle bisector drawn between beach and pier</p> <p>Correct regions indicated/shaded</p> 	<p>(1)</p> <p>(1)</p> <p>(1)</p> <p>(1)</p>
4)	<p>The diagram shows a rectangle. On the diagram draw the locus of the points that are 2 cm from the perimeter of the rectangle.</p> 	<p>Arcs radius 2 cm around corners of the rectangle</p> <p>Lines parallel and 2 cm away from perimeter outside the rectangle</p> <p>Lines parallel and 2 cm away from perimeter inside the rectangle</p> 	<p>(1)</p> <p>(1)</p> <p>(1)</p>

Where to go next?

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