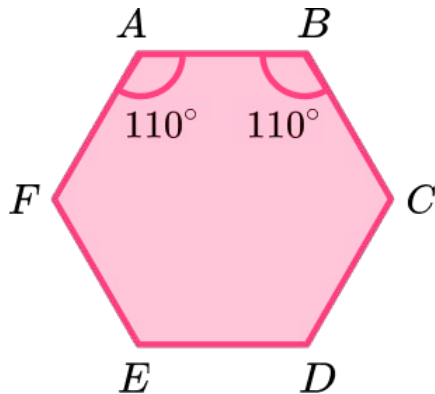# THIRD SPACE LEARNING

GCSE Exam Questions

2D Shapes | Geometry & Measure

GCSE Exam Questions: 2D Shapes

1) The hexagon *ABCDEF* has one line of symmetry.

Angle *FAB* = angle *ABC* = 110°

Angle *AFE* = angle *BCD*.

Angle *FED* = angle *CDE*.

Angle *CDE*: angle *BCD* = 3 : 2.

Find the size of angle *AFE*.

_____°

(5 marks)

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2) The perimeter of the rectangle is twice the perimeter of the isosceles triangle.
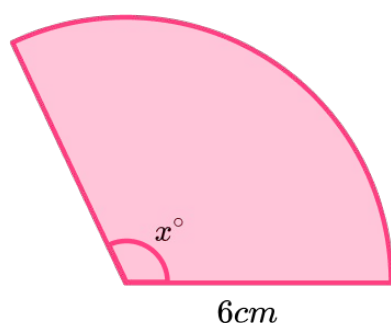
Measurements are in cm.
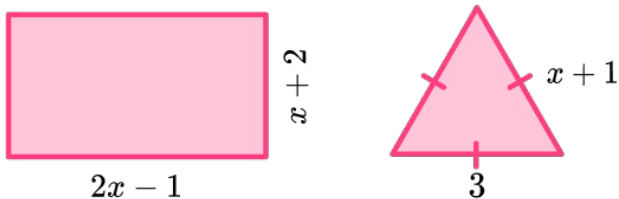
Find the area of the rectangle.

_____ cm²

(5 marks)

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1

GCSE Exam Questions: 2D Shapes

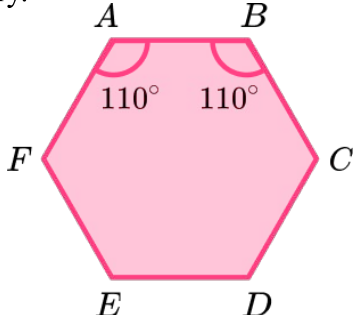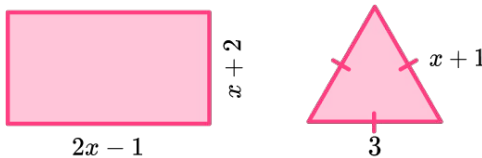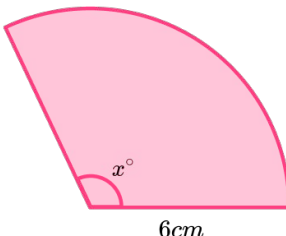**3)** The sector has a perimeter $25cm$ and radius $6cm$.

Find the size of angle x. Give your answer to 3 significant figures.

(3 marks)

4) A regular polygon has interior angles and exterior angles in the ratio 13 : 2.

Find the number of sides.

(3 marks)

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GCSE Exam Questions: 2D Shapes Answers

	Question	Answer	Marks
1)	The hexagon ABCDEF has one line of symmetry. *A* *B* 110° 110° *F* *C* *E* *D* Angle *FAB* = angle *ABC* = 110° Angle *AFE* = angle *BCD*. Angle *FED* = angle *CDE*. Angle *CDE*: angle *BCD* = 3 : 2. Find the size of angle *AFE*.	Indicating sum of angles is 720° or 540° if line of symmetry used to form a pentagon 720 - (110 + 110) = 500 **or** 540 - (110 + 180) = 250 Use of ratio 3:2 **or** 3*x* **and** 2*x* **seen** **or** 5*x* = 250 *x* = 50 Angle *AFE* = 100°	**(1)** **(1)** **(1)** **(1)** **(1)**
2)	The perimeter of the rectangle is twice the perimeter of the isosceles triangle. Measurements are in cm. $x + 2$ $2x - 1$ $x + 1$ 3 Find the area of the rectangle.	$6x + 2$ **or** $2x + 5$ **seen** $6x + 2 = 2(2x + 5)$ **oe** $x = 4$ $2x - 1 = 2(4) - 1 = 7$ **and** $x + 2 = (4) + 2 = 6$ (6 x 7) = 42 cm^2	**(1)** **(1)** **(1)** **(1)** **(1)**
3)	The sector has a perimeter 25cm and radius 6cm. $x°$ $6cm$ Find the size of angle x. Give your answer to 3 significant figures.	Sight of arc length given as 13cm $\frac{x}{360}$ x 2 x π x 6 =13 **oe** $x = 124°$	**(1)** **(1)** **(1)**
4)	A regular polygon has interior angles and exterior angles in the ratio 13 : 2 Find the number of sides.	$180 \div 5 = 24$ **oe** 156° **or** 24° **seen** 15 sides	**(1)** **(1)** **(1)**

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Where to go next?

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