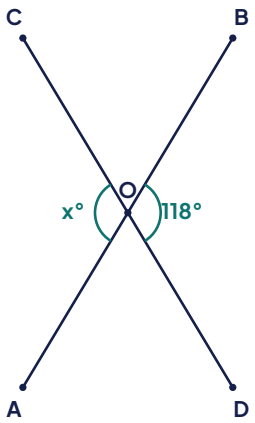
Geometry and measure: Lower Secondary Maths worksheet

Name	Date	Time allowed **45 minutes**	Total **29 marks**
_____	_____		

Instructions
Answer all questions. Show your working clearly: marks are given for each correct step. Write your answers in the spaces provided.

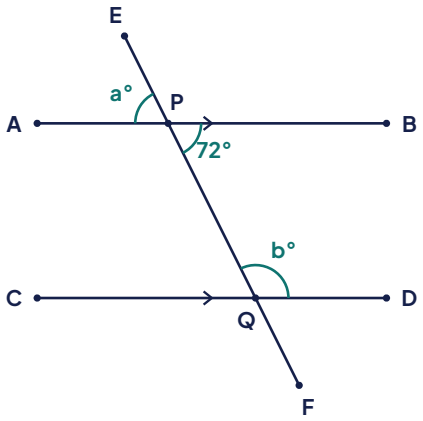
1 Find the value of x in the diagram below, where two straight lines cross. **[2]**



2 In the diagram, line AB is parallel to line CD. The transversal EF crosses both lines. **[4]**

(a) Find the value of a°, giving a reason.

(b) Find the value of b°, giving a reason.



3 A rectangular garden measures 12 m by 7.5 m. A path 1.5 m wide is built all the way round the outside of the garden (so the path forms a border around the rectangle). **[5]**

(a) Find the area of the garden.

(b) Find the overall area of the garden plus the path.

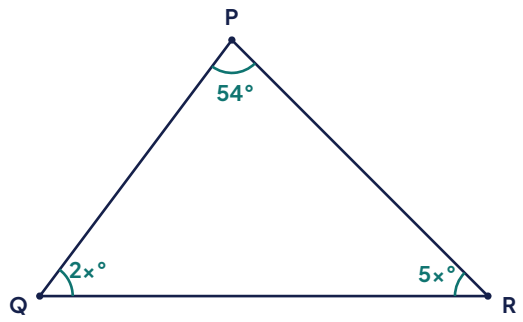
(c) Find the area of just the path.

4 A cylinder has a radius of 4 cm and a height of 10 cm. Calculate its volume, giving your answer to 1 decimal place. (Use π = 3.142) **[3]**

5 Triangle PQR has angle P = 54° and angle Q = 2x°. Angle R is 3x° more than angle Q. **[5]**

(a) Write an equation using the angle sum of a triangle and solve it to find x.

(b) Hence find the sizes of angle Q and angle R.



Not drawn to scale

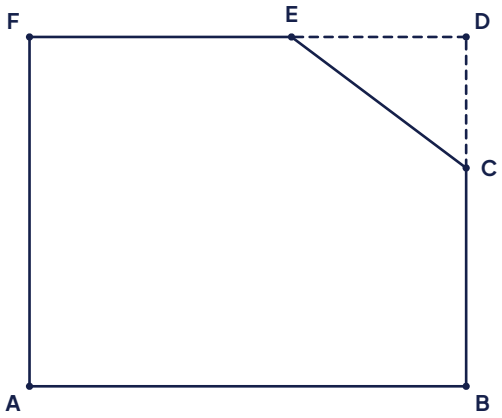
6 Using only a ruler and compasses, describe step by step how you would construct the perpendicular bisector of a line segment AB. You do not need to draw it, just explain the method clearly. **[3]**

7 The diagram shows a composite shape made from a rectangle with a right-angled triangle removed from one corner. The rectangle is 10 cm by 8 cm. The triangle removed has a base of 4 cm and a height of 3 cm. **[4]**

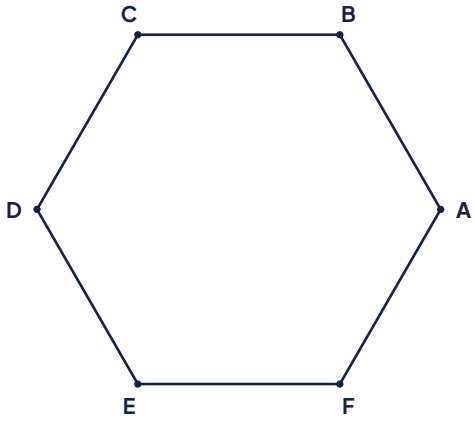
(a) Find the area of the rectangle.

(b) Find the area of the triangle removed.

(c) Find the area of the remaining composite shape.



8 A regular hexagon is shown below. Calculate the size of each interior angle. **[3]**



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