

is perpendicular to the straight line through $(2, 8)$ and $(6, 15)$
and
passes through $(0, 9)$ and $(x, 17)$

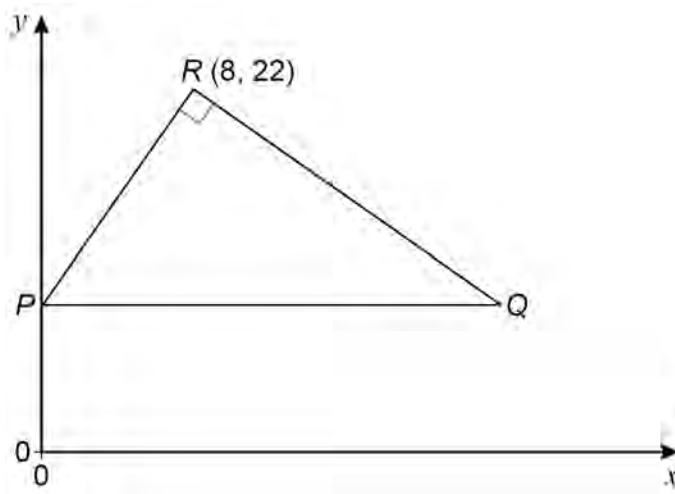
[4 marks]

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on the right side, suggesting it's resting on a surface.

$$x =$$

2

Points P , Q and $R(8, 22)$ form a triangle.



Not drawn accurately

PQ is a horizontal line, with P on the y -axis.

Angle PRQ is a right angle.

The gradient of PR is 2

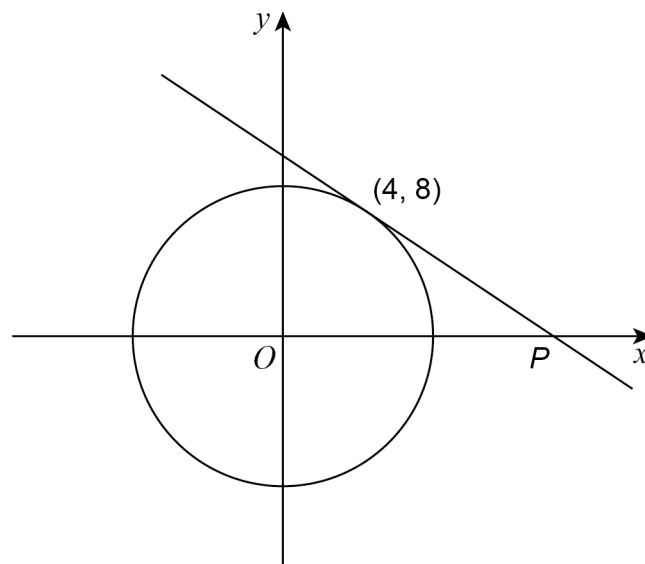
Work out the coordinates of Q.

[5 marks]

Answer (_____ , _____)

3 (4, 8) is a point on a circle, centre O .

The tangent at (4, 8) intersects the x -axis at P .



Work out the x -coordinate of P .

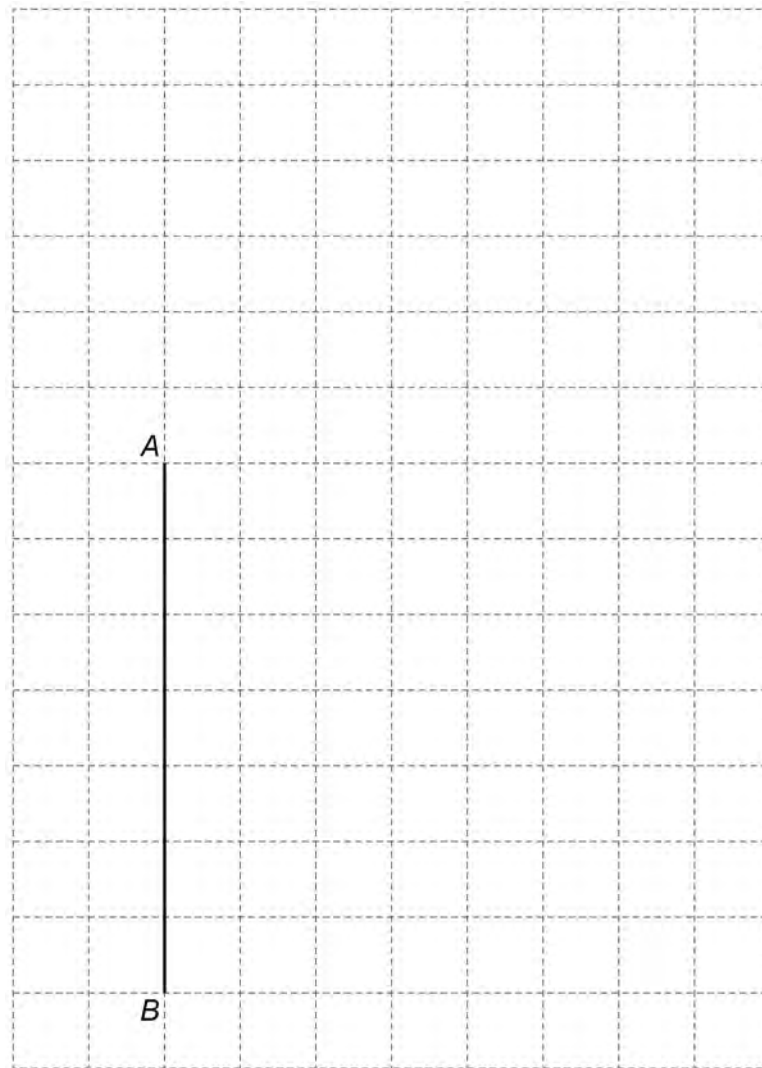
[5 marks]

Answer _____

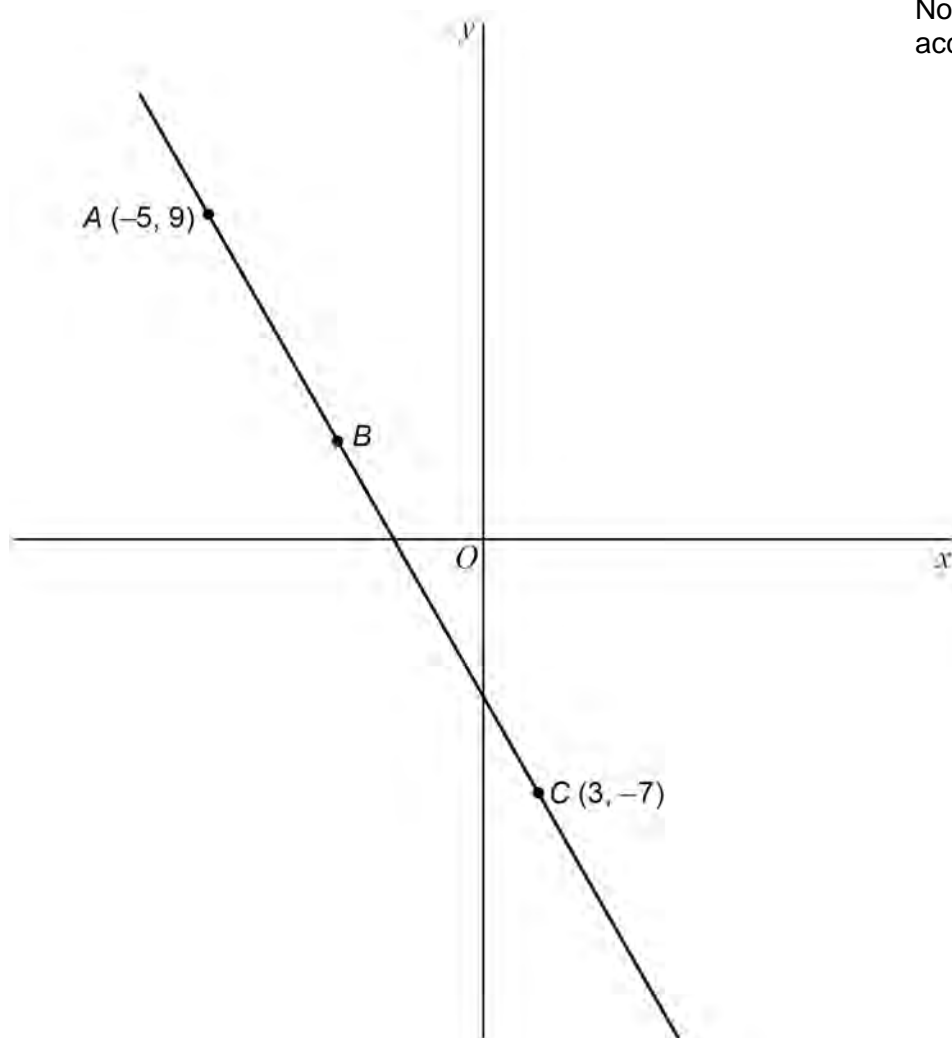
4

 $ABCDE$ is a pentagon with $AB = 7\text{ cm}$

- $BC = 6\text{ cm}$
- AB and BC are perpendicular.
- AB and DC are equal **and** parallel.
- Area of the pentagon $= 54\text{ cm}^2$
- The pentagon has exactly **one** line of symmetry.

Complete a **labelled** drawing of the pentagon.**[4 marks]**

- 5 A straight line passes through points $A(-5, 9)$, B and $C(3, -7)$.



Not drawn
accurately

5 (a)

Work out the equation of the line perpendicular to AC that passes through C.

[4 marks]

Answer _____