THIRD SPACE LEARNING

GCSE Exam Questions

Circle Graphs | Algebra

GCSE Exam Questions: Circle Graphs

1) What is the diameter of the circle $x^2 + y^2 = 36$?

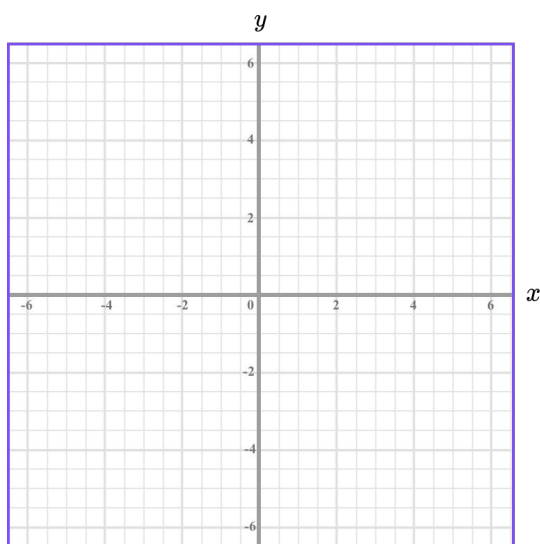Circle your answer.

        6   12   18   72

(1 mark)

2) A point P (10, - 5) lies on a circle $x^2 + y^2 = 125$.

Find the equation of the tangent to the circle at point P.

(3 marks)

3) **(a)** On the grid, draw the graph of $x^2 + y^2 = 25$.

(2)

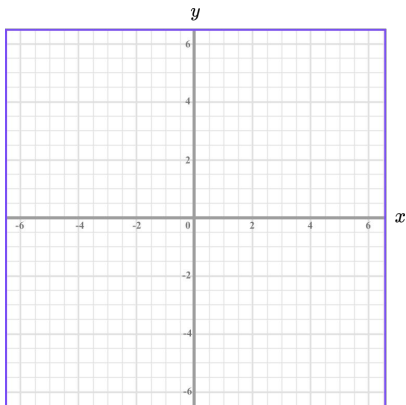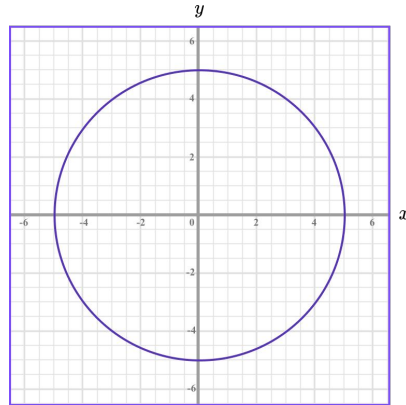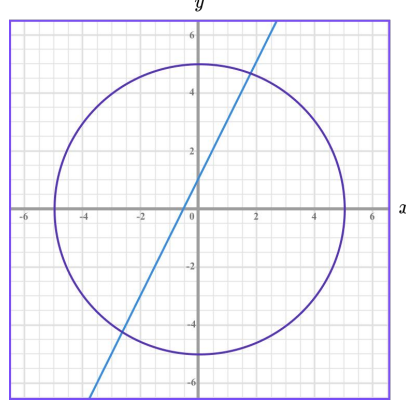   **(b)** Hence find estimates for the solutions of simultaneous equations:

        $x^2 + y^2 = 25$

        $y = 2x + 1$

(3)

(5 marks)

GCSE Exam Questions: Circle Graphs Answers

	Question	Answer	Marks
1)	What is the diameter of the circle $x^2 + y^2 = 36$? Circle your answer. 6 12 18 72	Radius is $\sqrt{36} = 6$ Diameter = 2 x 6 = 12	**(1)**
2)	A point P (10, - 5) lies on a circle $x^2 + y^2 = 125$. Find the equation of the tangent to the circle at point P.	Gradient of OP (the radius) is $-\dfrac{1}{2}$ Gradient of the tangent is 2 $y = 2x - 25$	**(1)** **(1)** **(1)**
3) (a)	On the grid, draw the graph of $x^2 + y^2 = 25$. 	**(a)** Circle with centre (0, 0) Radius = 5	**(1)** **(1)**
(b)	Hence find estimates for the solutions of simultaneous equations: $x^2 + y^2 = 25$ $y = 2x + 1$	**(b)** $y = 2x + 1$ correctly drawn $x = 1.8$ **and** $y = 4.7$ $x = - 2.6$ **and** $y = - 4.3$	**(1)** **(1)** **(1)**

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