



Equation of a Circle



SCAN ME

REVISE THIS TOPIC

CHECK YOUR ANSWERS

SCAN ME

1 The equation of a circle is $x^2 + y^2 = 16$
Write down the radius of the circle. [1 mark]

Answer _____

2 The equation of a circle is $x^2 + y^2 = 100$
Write down the diameter of the circle. [1 mark]

Answer _____

3 The equation of a circle is $x^2 + y^2 = 400$
Write down the radius of the circle. [1 mark]

Answer _____

4 The equation of a circle is $x^2 + y^2 = 9$
Write down the diameter of the circle. [1 mark]

Answer _____

5 The equation of a circle is $x^2 + y^2 = 16^2$
Write down the radius of the circle. [1 mark]

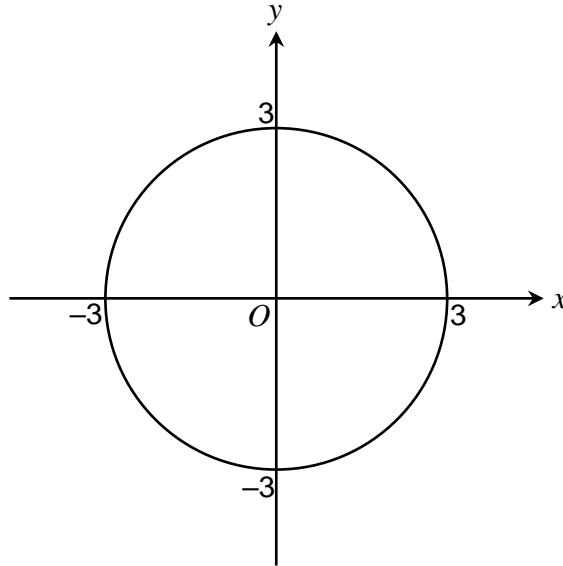
Answer _____



- 6 The equation of a circle is $x^2 + y^2 = 25$
Write down the coordinates of the centre of the circle. [1 mark]

Answer _____

- 7 A circle, centre O , passes through $(3, 0)$ [1 mark]



Write down the equation of the circle.

Answer _____

- 8 A circle has centre $(0, 0)$ and passes through $(9, 0)$
Write down the equation of the circle. [1 mark]

Answer _____





9 Match each equation of a circle on the left with its radius on the right. [2 marks]

$$x^2 + y^2 = \frac{1}{4}$$

$$x^2 + y^2 = 4$$

$$x^2 + y^2 = 16$$

$$x^2 + y^2 = 64$$

$$\frac{1}{4}$$

$$\frac{1}{2}$$

$$2$$

$$4$$

$$8$$

$$16$$

$$32$$

$\frac{1}{5}$

Turn over ►





10 A circle with centre $(0, 0)$ has a diameter of 10.
Write down the equation of the circle. **[1 mark]**

Answer _____

11 A circle has centre $(0, 0)$
The line $y = -12$ is a tangent to the circle.
Write down the equation of the circle. **[1 mark]**

Answer _____

12 A circle with centre $(0, 0)$ has a diameter of 3.
Write down the equation of the circle. **[1 mark]**

Answer _____

13 A circle with centre $(0, 0)$ has a radius of $\sqrt{7}$.
Write down the equation of the circle. **[1 mark]**

Answer _____

14 The equation of a circle is $x^2 + y^2 = 9.82$
Write down the area of the circle in terms of π **[1 mark]**

Answer _____ units²





15 Tick the correct box for each statement below

[2 marks]

	True	False
$x^2 = 30 - y^2$ is an equation of a circle.	<input type="checkbox"/>	<input type="checkbox"/>
$\frac{x^2}{2} + \frac{y^2}{2} = 7$ is an equation of a circle.	<input type="checkbox"/>	<input type="checkbox"/>
$x^2 - y^2 = 64$ is an equation of a circle.	<input type="checkbox"/>	<input type="checkbox"/>
$x^2 + y^2 = \pi^2$ is an equation of a circle.	<input type="checkbox"/>	<input type="checkbox"/>

16 The equation of a circle is $x^2 + y^2 = 20$
Work out the radius of the circle.

Give your answer in the form $a\sqrt{b}$, where a and b are integers.

[2 marks]

Answer _____

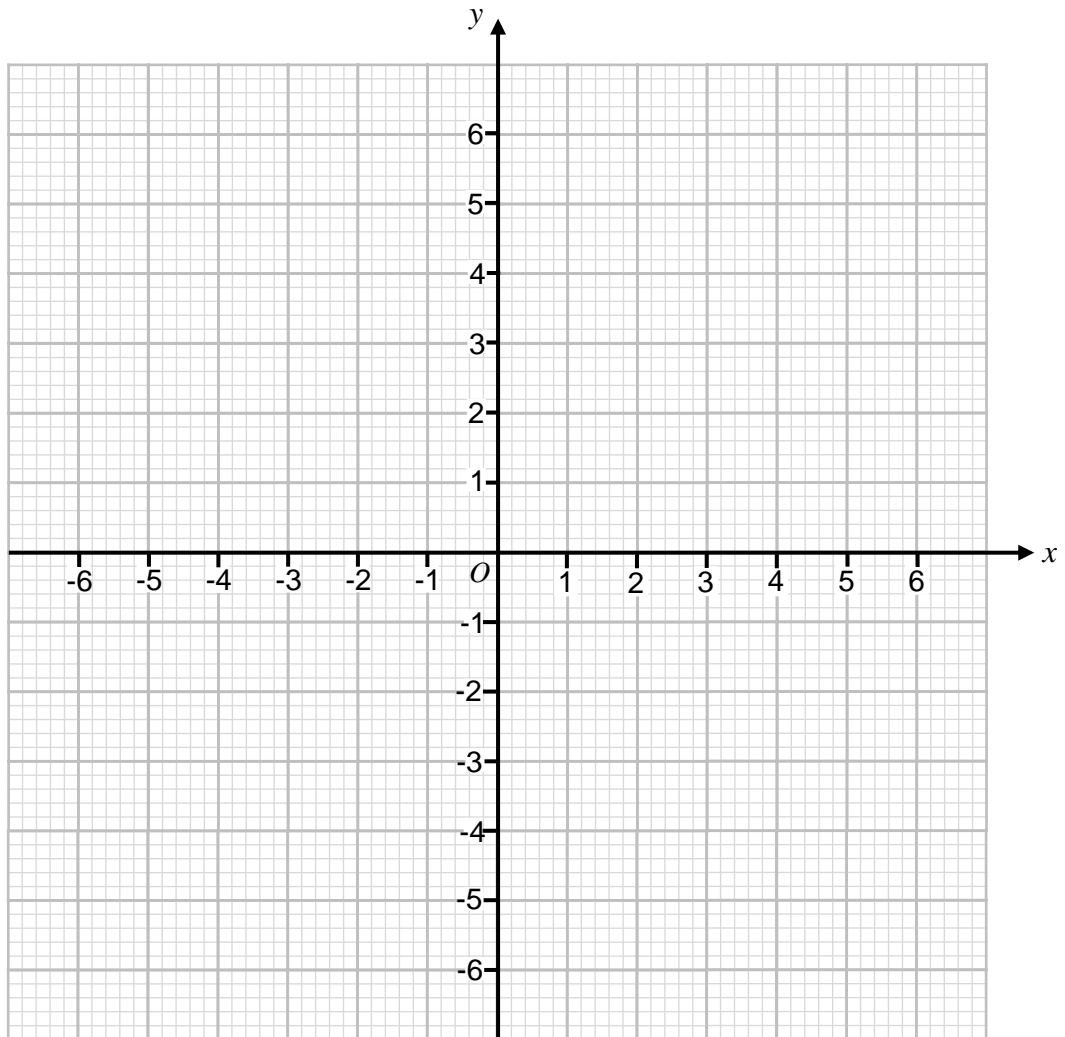
$\frac{\quad}{9}$

Turn over ►





17

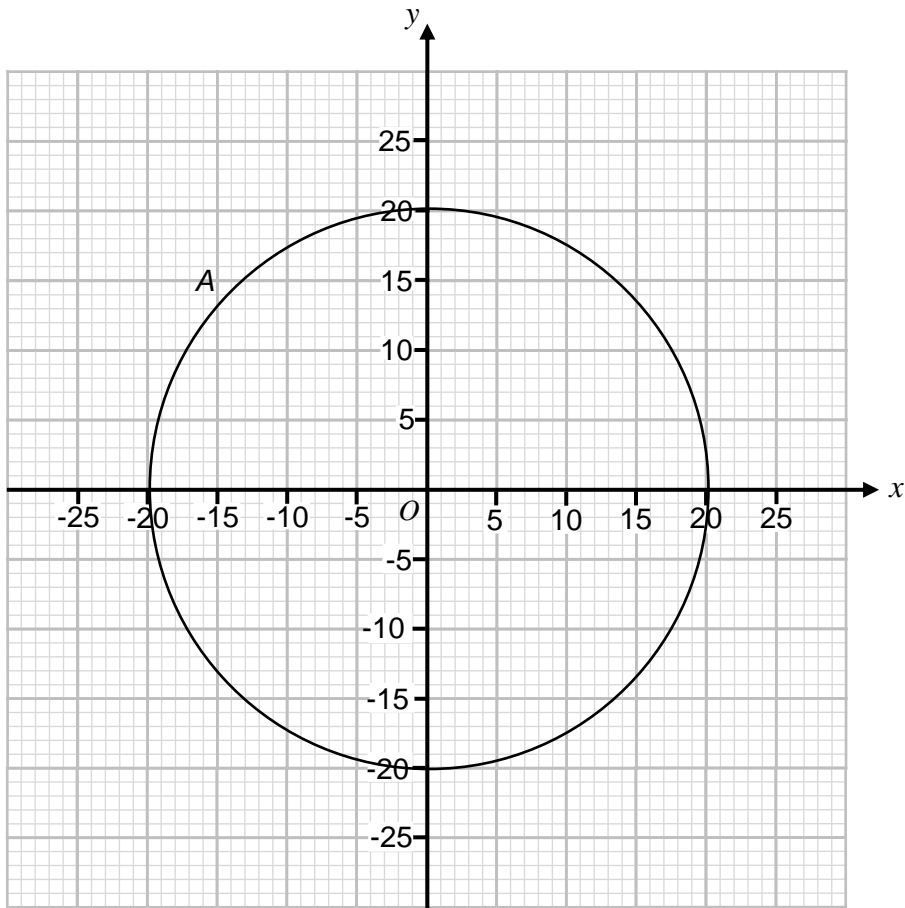


17 (a) On the grid above, draw the graph of $x^2 + y^2 = 16$ [2 marks]
Label the graph *A*.

17 (b) On the grid above, draw the graph of $x^2 + y^2 = 30\frac{1}{4}$ [2 marks]
Label the graph *B*.



18

The graph of circle A is shown on the grid below.

18 (a) Write down the equation of circle A

[1 mark]

Answer _____

18 (b) Sammi draws another circle called circle B .

[2 marks]

Area of circle $B = 50\%$ of the area of circle A .Work out the equation of circle B .

Answer _____

