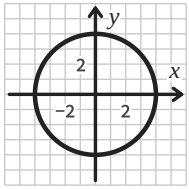
Equation of a circle

Exit ticket ANSWERS Name _____

1. The circle has centre (0, 0).
Write its equation.



$x^2 + y^2 = 16$

2. Write down the radius of the circle $x^2 + y^2 = 81$.

9

3. Is the point (−2, 5) inside, on or outside the circle $x^2 + y^2 = 25$? Show how you know.

Outside: 4 + 25 = 29

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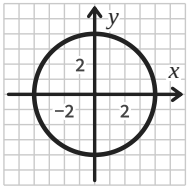

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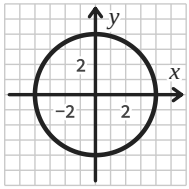

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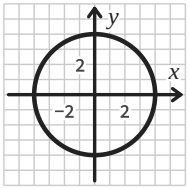

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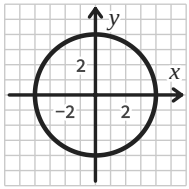

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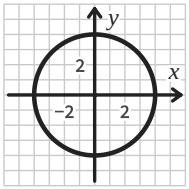

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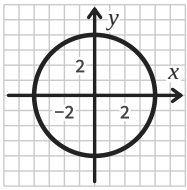
Exit ticket Equation of a circle

NEXT LESSON

1 **The circle has centre (0, 0). Write its equation.**



$x^2 + y^2 = 16$

TESTS The equation from the radius

LOOK FOR $x^2 + y^2 = 4$ the radius not squared

$x^2 + y^2 = 8$ the radius doubled, not squared

FIX IT

A circle has centre (0, 0) and radius 6.
Write its equation. $x^2 + y^2 = 36$

2 **Write down the radius of the circle $x^2 + y^2 = 81$.**

9

TESTS The radius from the equation

LOOK FOR 81 the number in the equation is r^2, not r

40.5 halved: the radius is the square root

FIX IT

Write down the radius of the circle $x^2 + y^2 = 49$. 7

3 **Is the point (−2, 5) inside, on or outside the circle $x^2 + y^2 = 25$? Show how you know.**

Outside: 4 + 25 = 29

TESTS Inside, on or outside, by substituting

LOOK FOR inside: −4 + 25 = 21 $(-2)^2 = 4$, not −4

on: 5 is the radius one coordinate is not the distance: substitute both

FIX IT

Is the point (−1, 7) inside, on or outside the circle $x^2 + y^2 = 50$? On: 1 + 49 = 50