What's Going On?

Checking In	F.F.M.
Minds on	Equation of a Circle with Centre (0,0)
Action!	Equation of a Circle not Centred at (0,0)
Consolidation	Practice Test

Learning Goal - I will understand equations of circles!

Give me the **equation** of a line, any line!

$y = 12x + 3$

$y = 13$

$2x + 2y = 2$

$5x + 3y = 0$

$7x + 13y - 7 = 0$

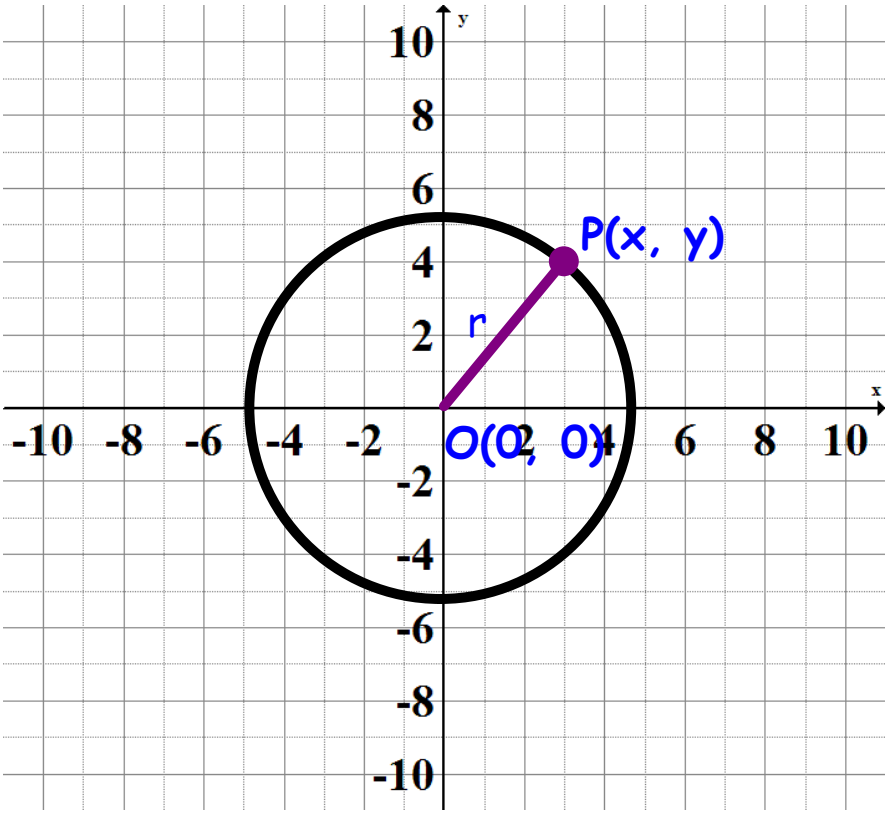
$x = 10$

Equations of lines have **variables**!!
They allow us to determine y given x, or x given y (points on the line!)

Equations of circles have **variables** too!!!!

Minds on

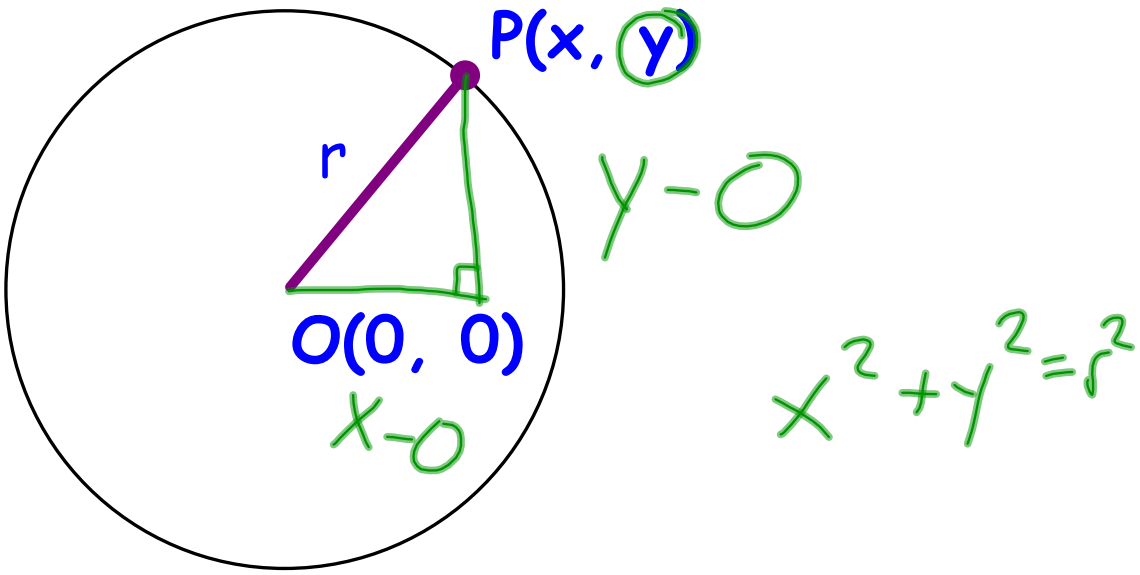
What's the general equation of a circle centered at the origin?



Minds on

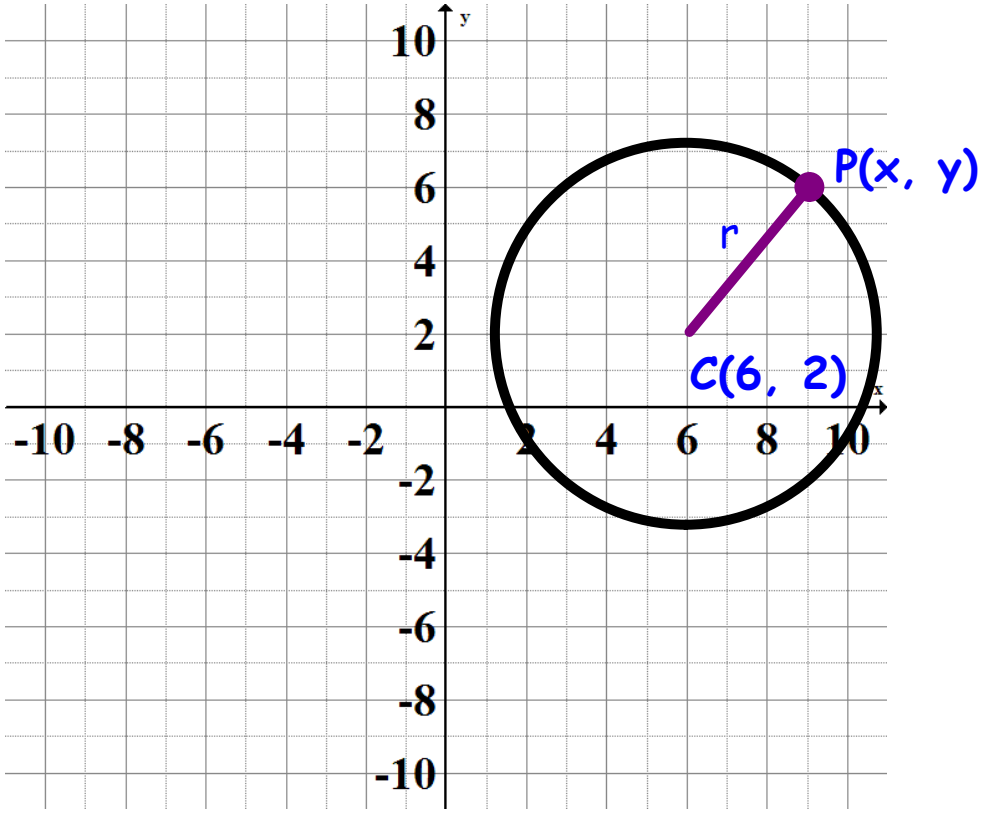
The general equation of a circle centred at the origin is $x^2 + y^2 = r^2$.

WHY??



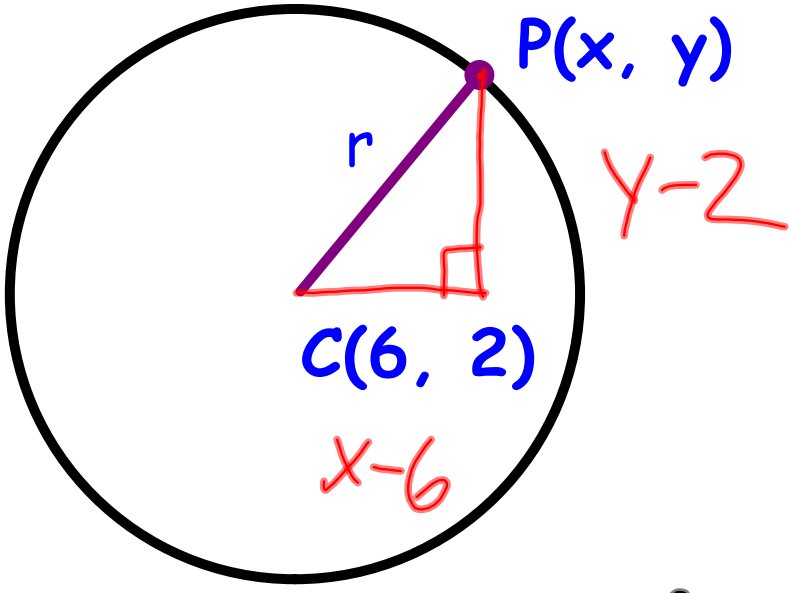
Action!

What's the general equation of a circle NOT centered at the origin?



Action!

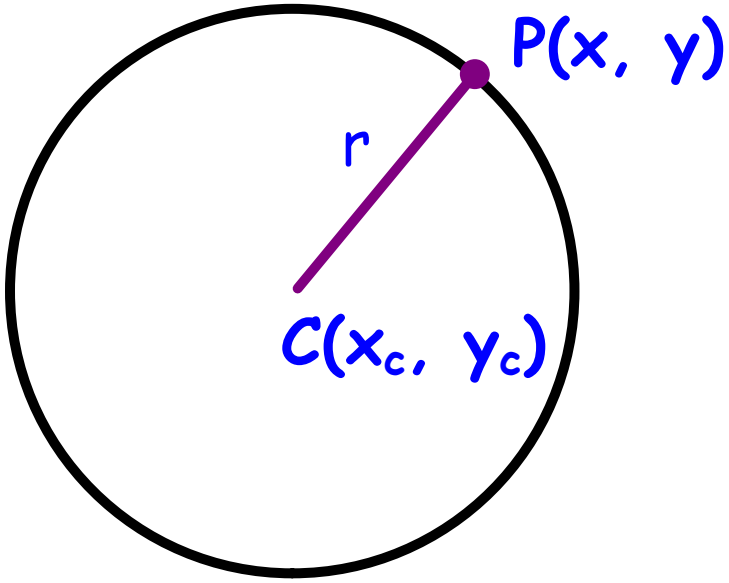
What's the general equation of a circle **NOT** centered at the origin?



$$(y-2)^2+(x-6)^2=r^2$$

Action!

What's the general equation of a circle **NOT** centered at the origin?



$$(x - x_c)^2 + (y - y_c)^2 = r^2$$

Consolidation

Some Circle Practice

Determine the equation of a circle, with centre (5,7), and radius 6.

$(x-5)^2+(y-7)^2=36$

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Consolidation

Some Circle Practice

Determine the equation of a circle, with centre (-3,6), and radius 8.

$(x+3)^2+(y-6)^2=64$

Consolidation

Some Circle Practice

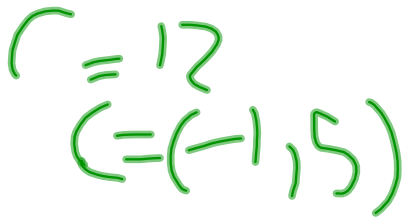
Determine the radius and centre of a circle, with equation $(x - 3)^2 + (y - 8)^2 = 64$

$C = (3, 8)$ $r = 8$

Consolidation

Some Circle Practice

Determine the radius and centre of a circle, with equation $(x + 1)^2 + (y - 5)^2 = 144$



Consolidation

Some Circle Practice

Determine the radius and centre of a circle, with equation $(x + 6)^2 + (y + 8)^2 = 9$

$r = 3$

$C = (-6, -8)$

Consolidation

Practice Test