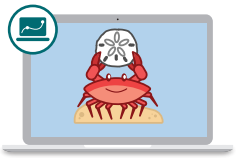
Name: Date: Period:

Claudine the Crab



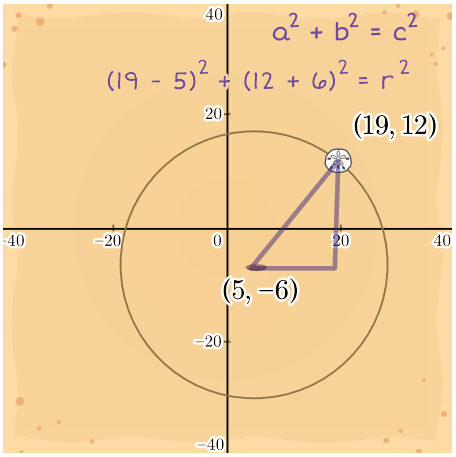
Entire Lesson

Things to Remember:

Select Screens

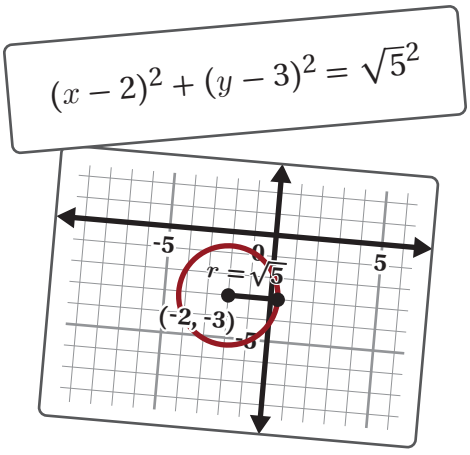
5 Here is how Kala calculated the radius for Clawdine's circle to get the sand dollar at $(19, 12)$.

Notes from class discussion:



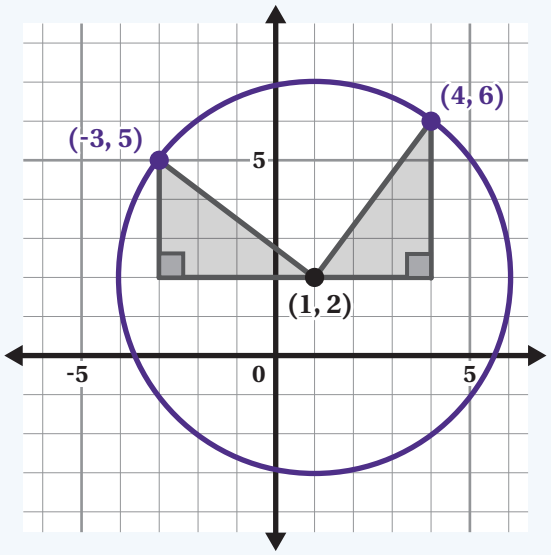
7 Kala incorrectly matched these two cards.

Write the correct equation for this circle.



Lesson Summary

Here is a circle centered at $(1, 2)$. The points $(4, 6)$ and $(-3, 5)$ are on this circle.



To calculate the radius of this circle, you can use the center, a point on the circle, $(4, 6)$ and the Pythagorean theorem:

$$(4 - 1)^2 + (6 - 2)^2 = r^2$$

Evaluate the left side of the equation, $25 = r^2$ so the radius of this circle is $\sqrt{25}$, or 5 units.

Then check this radius using another point on the circle, like $(-3, 5)$:

$$(-3 - 1)^2 + (5 - 2)^2 = r^2$$

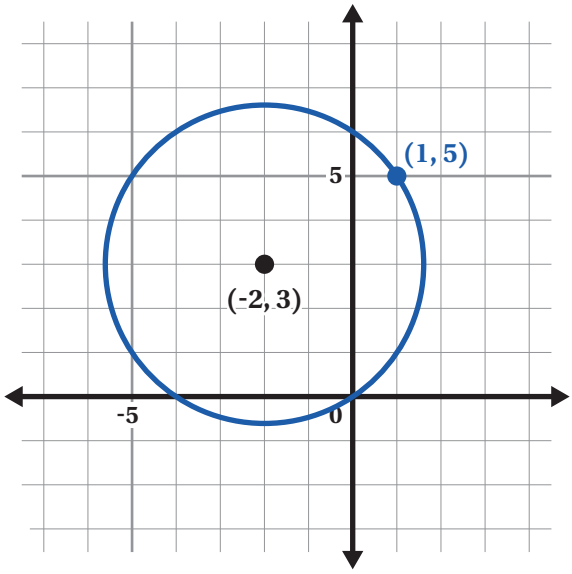
Evaluate the left side of the equation, $25 = r^2$, so the radius is $\sqrt{25}$, or 5 units.

You can use this equation to describe every point (x, y) on this circle: $(x - 1)^2 + (y - 2)^2 = 5^2$.

In general, a circle with center (h, k) and radius r can be written as $(x - h)^2 + (y - k)^2 = r^2$.

Try This

Here is a circle centered at $(-2, 3)$. The point $(1, 5)$ is on this circle.



a Determine the length of the radius for this circle.

b Write an equation for this circle.