Which radii is the longest?

definition of a circle

The set of all points exactly the same distance from the center.
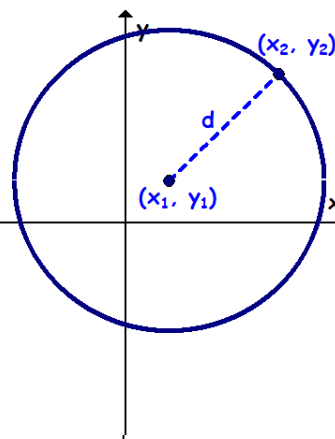
Thus, the distance formula gives us the equation of any circle:

$$d = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

(h, k) is the center
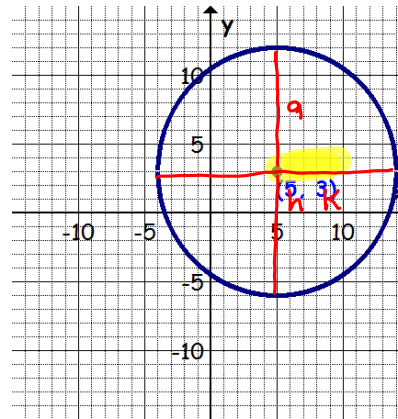
r is the radius

$(x - h)^2 + (y - k)^2 = r^2$

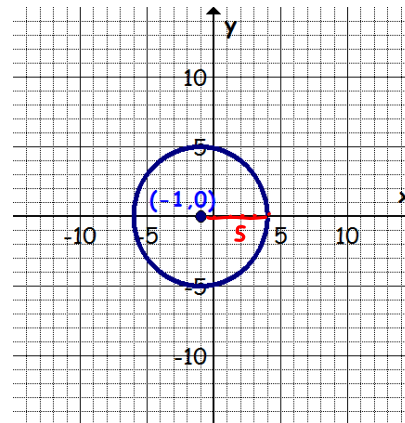Write the equation given a graph

$(x - h)^2 + (y - k)^2 = r^2$

$(x - 5)^2 + (y - 3)^2 = 9^2$

$(x-5)^2 + (y-3)^2 = 81$
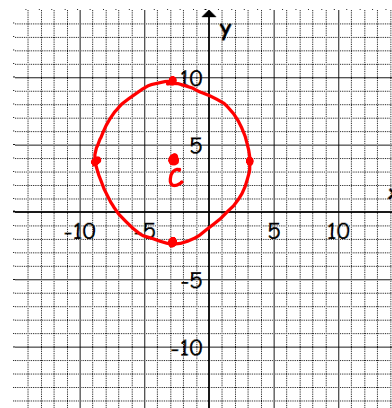

$(x - -1)^2 + (y - 0)^2 = 5^2$

$(x+1)^2 + y^2 = 25$

Draw the graph given the equation

$(x - h)^2 + (y - k)^2 = r^2$

$(x+3)^2 + (y - 4)^2 = 36$

center: $(-3, 4)$

radius: $\sqrt{36} = 6$

$x^2 + y^2 = 16$

$(x-0)^2 + (y-0)^2 = 4^2$

center: $(0, 0)$

radius: 4

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