Quiz 2: Question 36

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We simply plug each point's x and y values into the equation of the circle. If the value is less than the r^2, the point is within the interior of the circle. If the value is equal to the r^2, the value is on the circle. Finally, the point would be exterior to the circle if the value is greater than the r^2 .

$$A(-1,1) \tag{1}$$
$$(-1-3)^2 + 1^2! = 49 \tag{2}$$
$$17 < 49 \tag{3}$$

Point A is within the interior of the circle.

$$B(10,0) \tag{4}$$
$$(10-3)^2 + 0^2 = 49 \tag{5}$$
$$49 = 49 \tag{6}$$

Point B is on the circle.

$$C(4,-8) \tag{7}$$
$$(4-3)^2 + (-8)^2! = 49 \tag{8}$$
$$65 > 49 \tag{9}$$

Point C is outside on the exterior of the circle.
The graph of the circle with the points respect to its location are shown graphically below.

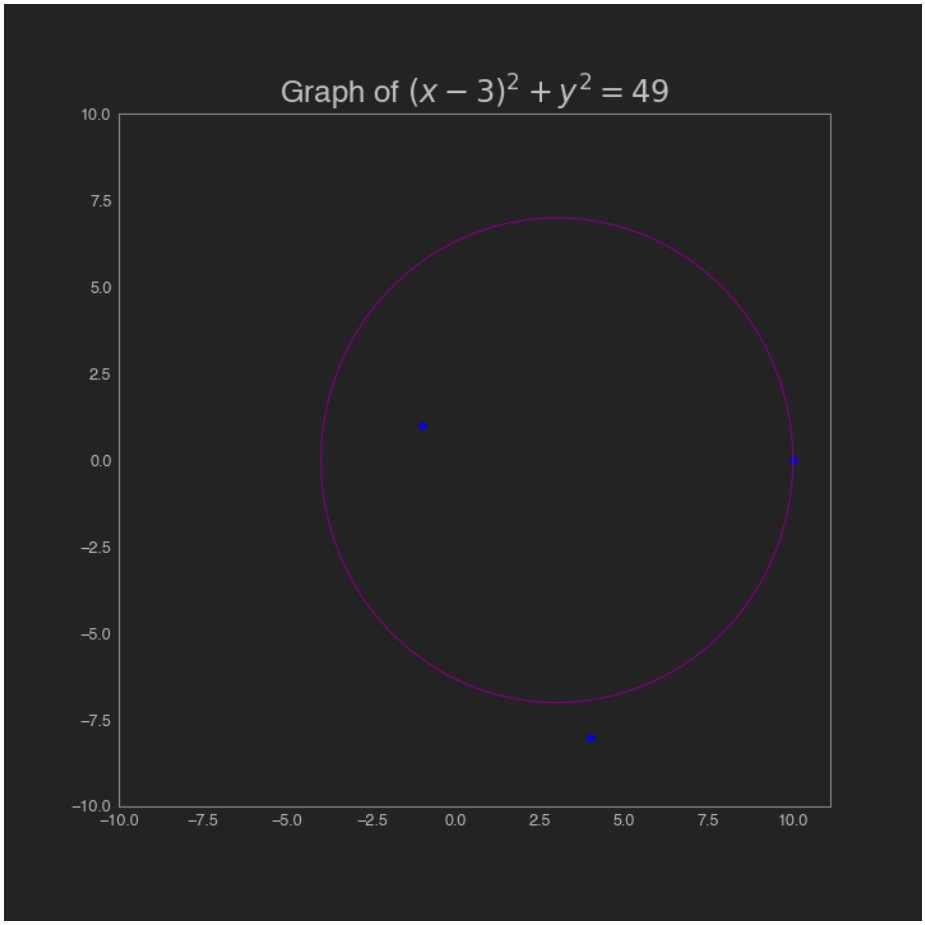

Figure 1: Graph of Circle with Respective Point Locations