Name _____ Date _____

Using Coordinates To Prove Theorems - Guided Lesson Explanation

Explanation#1

The diatance from the center to the given point on the circle is

$d_1 = \sqrt{(-6.2 - (-8.1))^2 + (-3.2 - (-7.3))^2}$

$d_1 = \sqrt{(-6.2 + 8.1)^2 + (-3.2 + 7.3)^2}$

$d_1 = \sqrt{20.42}$

$d_1 = 4.59$

Step 2) The distance from the center to the point in equation is

$d_1 = \sqrt{(-2.1 - (-8.1))^2 + (-4.4 - (-7.3))^2}$

$d_1 = \sqrt{(-2.1 + 8.1)^2 + (-4.4 + 7.3)^2}$

$d_1 = \sqrt{44.41}$

$d_1 = 6.65$

These are not same value.So both th points don't lie on one circle.

Explanation#2

The diatance from the center to the given point on the circle is

$d_1 = \sqrt{(4 - 1)^2 + (6 - 2)^2}$

$d_1 = \sqrt{25}$

$d_1 = 5$

Step 3) The distance from the center to the point in equation is

$d_1 = \sqrt{(-2 - 1)^2 + (-2 - 2)^2}$

$d_1 = \sqrt{25}$

$d_1 = 5$

These are the same value. There, point (4, 6) lies on the circle centered at (1, 2), and containing the point (-2, -2).

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Explanation#3

The distance from the center to the given point on the circle is

$d_1 = \sqrt{(7 - 2)^2 + (17 - 5)^2}$

$d_1 = \sqrt{169}$

$d_1 = 13$

Step 3) The distance from the center to the point in equation is

$d_1 = \sqrt{(-3 - 2)^2 + (-7 - 5)^2}$

$d_1 = \sqrt{169}$

$d_1 = 13$

these are the same value. There point (7, 17) lies on the circle centered at (2, 5), and containing the point (-3, -7)