Geometry (G.GPE.B.4) Name: _____

Unit Five: Equations of Circles – Day 2 (HW18) Date: _____ Period: _____

Solve problems using the distance and midpoint formulas.

1. Given circle C, C(-3,5) and point D(3,-3) on the circle, determine the equation of the circle.

2. Given endpoints of diameter $\overline{AB}$, A(-7,-1) and B(1,5), determine the center, the radius and the equation of the circle.

Center = (_____ , _____)

Radius = _____

Equation of the circle

_____

3. Determine if the given points are in the (E)xterior, (I)nterior or (O)n circle **C,** $(x-3)^2+(y+1)^2=100$ **.**

a) D (12,2) b) E (-3,-9) c) F (-1,9) d) G(9,-9)

E or I or O E or I or O E or I or O E or I or O

4. Circle C, centered at C(-2,3) has a chord $\overline{AB}$ with endpoints of A(1,-1) and B(3,3). Determine the midpoint of the chord and the distance that the chord is from the center of the circle.

Midpoint = (_____ , _____)

Distance = _____ (2 dec.)

5. Determine the x intercepts of circle C, $(x-2)^2 + (y-3)^2 = 25$.

6. Determine the equation of circle C, C(-2,5) with the given information.

a) is tangent to the x axis

b) goes through D(-2,1)

c) is tangent to the y axis

$(x+2)^2 + (y-5)^2 =$ _____

$(x+2)^2 + (y-5)^2 =$ _____

$(x+2)^2 + (y-5)^2 =$ _____

d) has a radius of 7 cm.

e) goes through D(4,-3)

f) goes through D(0,3)

$(x+2)^2 + (y-5)^2 =$ _____

$(x+2)^2 + (y-5)^2 =$ _____

$(x+2)^2 + (y-5)^2 =$ _____