12
12

32 pts

Quiz 3, S 1.3, 1.4

Name KEY

1. 1.3 *Determine the center and radius of each circle and sketch the graph.*

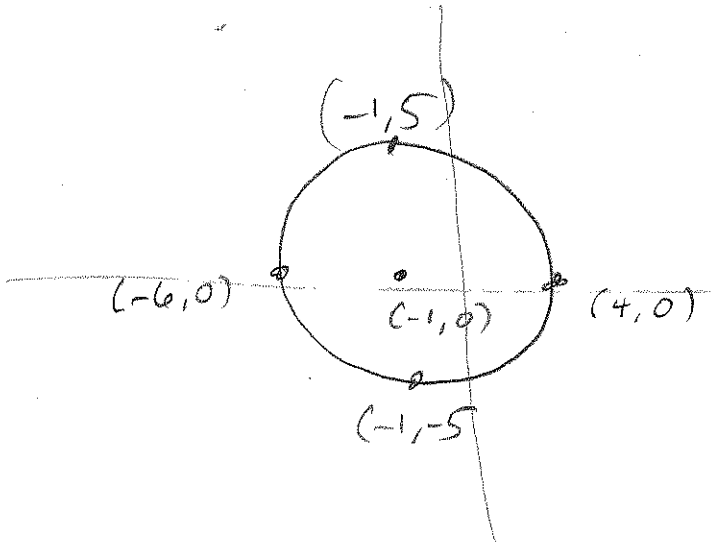
37. $y^2 = 25 - (x + 1)^2$

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

4 pts

$(h, k) = (-1, 0)$

$r = 5$



2. 1.3 *Write the standard equation for each circle.*

43. Center at $(-2, 5)$ with radius $1/2$

4 pts

$(x+2)^2 + (y-5)^2 = \left(\frac{1}{2}\right)^2$

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

3. 1.3 *Determine the center and radius of each circle and sketch the graph. See the rule for completing the square on page 108.*

52. $x^2 + y^2 = 4x$

4 pts

$x^2 - 4x + 2^2 + y^2 = 4$

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

$(h, k) = (2, 0)$

$r = 2$

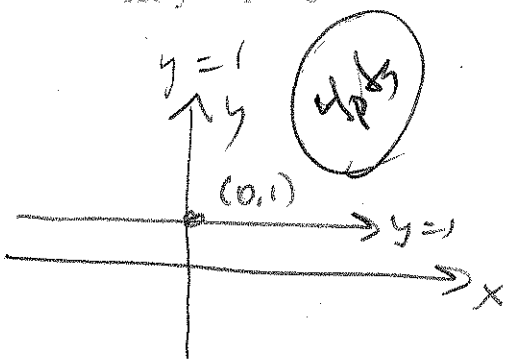
12

4. 1.3 *Graph each equation in the rectangular coordinate system.*

85. $y - 1 = 0$

$y = 1$

4pts

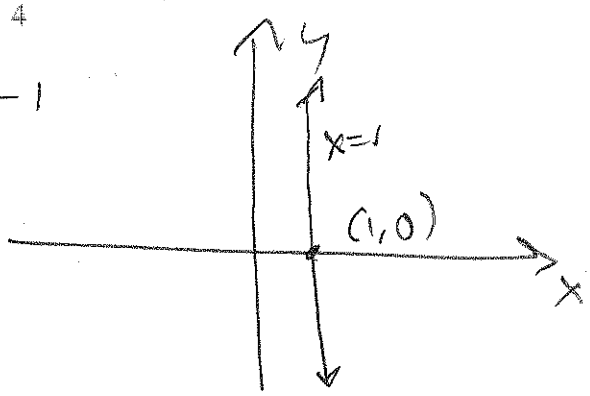


86. $5 - x = 4$

$-x = -1$

$x = 1$

4pts



5. 1.4 *Find an equation of the line through the given pair of points. I want to see the line expressed in all three forms:*

i. *Point-Slope*
ii. *Slope-Intercept*
iii. *Standard (with integer coefficients)*

20. $(-2, 1), (3, 5)$

6pts

$m = \frac{5-1}{3+2} = \frac{4}{5}$

$y = \frac{4}{5}(x+2) + 1$

$y = m(x - x_1) + y_1$

$y = \frac{4}{5}x + \frac{8}{5} + 1$

$y = \frac{4}{5}x + \frac{13}{5}$ $\quad y = mx + b$

$5y = 4x + 13$

$-4x + 5y = 13$

$Ax + By = C$

6. 1.4 *Find equations of the line described. Again, give its equation in all three forms.*

80. The line perpendicular to $y = 9x + 5$ and containing $(5, 4)$

6pts

$y = -\frac{1}{9}(x - 5) + 4$

$y = -\frac{1}{9}x + \frac{5}{9} + 4\left(\frac{9}{9}\right)$

$y = -\frac{1}{9}x + \frac{41}{9}$

$9y = -x + 41$

$x + 9y = 41$

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