

Math 110: Unit 1 Review

Name: _____ ID: _____

Find the center and radius.

(1) $4x + 3y = 10$

(2) $f(x) = x^2 + 4x + 27$

(3) $g(x) = 4x^2 + 4x + 2$

(4) Identify the center, radius, and graph the circle: $(x - 2)^2 + (y + 3)^2 = 9$



(5) Write the equation of the circle $(x - 2)^2 + (y + 3)^2 = 9$. Then identify the center, radius, and graph the circle: $x^2 + y^2 = 25$ or $4x^2 + 4y^2 = 41$ or 8.



(6) Find the center and the radius of a circle that passes through the endpoints of its diameter $(-5, 2)$ and $(3, -4)$.

Find the domain for each piecewise function. Write the domain in interval notation.

(1) $f(x) = \frac{x^2 - 2x + 4}{x + 2}$

(2) $g(x) = \frac{3x + 4}{x^2 - 25}$

(3) $h(x) = \frac{3x + 4}{x^2 - 25}$

(4) $k(x) = \frac{3x + 4}{x^2 - 25}$