NAME _____ DATE _____ PERIOD _____

Practice

Polar Form of a Linear Equation

Write each equation in polar form. Round ϕ to the nearest degree.

1. $3x + 2y = 16$

2. $3x + 4y = 15$

3. $3x - 4y = 12$

4. $y = 2x - 1$

Write each equation in rectangular form.

5. $4 = r \cos\left(\theta + \frac{5\pi}{6}\right)$

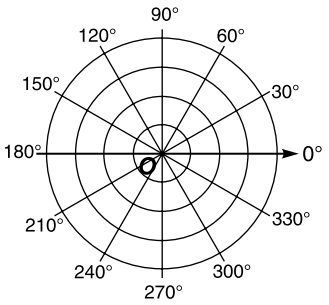
6. $2 = r \cos(\theta - 90°)$

7. $1 = r \cos\left(\theta - \frac{\pi}{4}\right)$

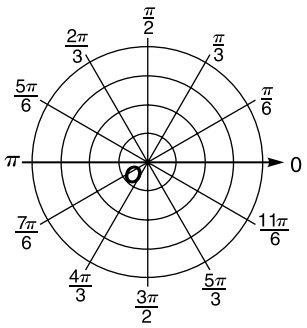
8. $3 = r \cos(\theta + 240°)$

Graph each polar equation.

9. $3 = r \cos(\theta - 60°)$



10. $1 = r \cos\left(\theta + \frac{\pi}{3}\right)$



11. ***Landscaping*** A landscaper is designing a garden with hedges through which a straight path will lead from the exterior of the garden to the interior. If the polar coordinates of the endpoints of the path are (20, 90°) and (10, 150°), where r is measured in feet, what is the equation for the path?