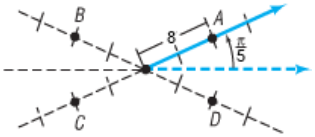
Polar Coordinates

1. Match each point in polar coordinates with either A, B, C, or D on the graph
(Similar to p.311 #9-16)



$$\left(-8, \frac{-\pi}{5}\right)$$

2. Plot each point given in polar coordinates
(Similar to p.311 #17-30)

$$\left(5, 135^{\circ}\right)$$

3. Plot each point given in polar coordinates
(Similar to p.311 #17-30)

$$\left(-2, \frac{\pi}{4}\right)$$

4. Plot each point given in polar coordinates
(Similar to p.311 #17-30)

$$\left(4, \frac{-3\pi}{4}\right)$$

5. Plot each point given in polar coordinates
(Similar to p.311 #17-30)

$$\left(-2, \frac{-\pi}{4}\right)$$

6. Plot each point given in polar coordinates, and find other polar coordinates (r, θ) of the point for which:
a) $r > 0, -2\pi \leq \theta < 0$
b) $r < 0, 0 \leq \theta < 2\pi$
c) $r > 0, 2\pi \leq \theta < 4\pi$
(Similar to p.311 #31-38)

$$\left(5, \frac{\pi}{4}\right)$$

7. Plot each point given in polar coordinates, and find other polar coordinates (r, θ) of the point for which:
a) $r > 0, -2\pi \leq \theta < 0$
b) $r < 0, 0 \leq \theta < 2\pi$
c) $r > 0, 2\pi \leq \theta < 4\pi$
(Similar to p.311 #31-38)

$$\left(-4, \frac{-5\pi}{6}\right)$$

8. The polar coordinates of a point are given. Find the rectangular coordinates of each point
(Similar to p.312 #39-54)

$$\left(7, \frac{\pi}{2}\right)$$

9. The polar coordinates of a point are given. Find the rectangular coordinates of each point
(Similar to p.312 #39-54)

$$\left(-3, \frac{5\pi}{6}\right)$$

10. The polar coordinates of a point are given. Find the rectangular coordinates of each point
(Similar to p.312 #39-54)

$$\left(-2.5, 133^\circ\right)$$

11. The rectangular coordinates of a point are given. Find the polar coordinates of each point
(Similar to p.312 #55-66)

$$(0,5)$$

12. The rectangular coordinates of a point are given. Find the polar coordinates of each point (Similar to p.312 #55-66)

$(-6,-6)$

13. The rectangular coordinates of a point are given. Find the polar coordinates of each point (Similar to p.312 #55-66)

$(3,-3\sqrt{3})$

14. The rectangular coordinates of a point are given. Find the polar coordinates of each point (Similar to p.312 #55-66)

$(-0.2,-3.4)$

15. The rectangular coordinates of a point are given. Find the polar coordinates of each point (Similar to p.312 #55-66)

$(-1.9,0.15)$

16. The letters x and y represent rectangular coordinates. Write each equation using polar coordinates (r, θ) (Similar to p.312 #67-74)

$x^2 + y^2 = 2x - 3y$

17. The letters x and y represent rectangular coordinates. Write each equation using polar coordinates (r, θ) (Similar to p.312 #67-74)

$5xy^2 = 3$

18. The letters r and θ represent polar coordinates. Write each equation using rectangular coordinates (x, y) (Similar to p.312 #75-82)

$$r = \cos\theta - 2$$

19. The letters r and θ represent polar coordinates. Write each equation using rectangular coordinates (x, y) (Similar to p.312 #75-82)

$$r = 7$$

20. The letters r and θ represent polar coordinates. Write each equation using rectangular coordinates (x, y) (Similar to p.312 #75-82)

$$\theta = \frac{\pi}{4}$$

21. The letters r and θ represent polar coordinates. Write each equation using rectangular coordinates (x, y) (Similar to p.312 #75-82)

$$r = \frac{5}{5 + \sin\theta}$$