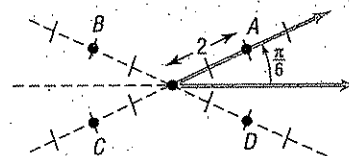


In Problems 1–8, match each point in polar coordinates with either A, B, C, or D on the graph.

1. $(2, \frac{-11\pi}{6})$ 2. $(-2, \frac{-\pi}{6})$ 3. $(-2, \frac{\pi}{6})$ 4. $(2, \frac{7\pi}{6})$
 5. $(2, \frac{5\pi}{6})$ 6. $(-2, \frac{5\pi}{6})$ 7. $(-2, \frac{7\pi}{6})$ 8. $(2, \frac{11\pi}{6})$



In Problems 9–20, plot each point given in polar coordinates.

9. $(3, 90^\circ)$ 10. $(4, 270^\circ)$ 11. $(-2, 0)$ 12. $(-3, \pi)$
 13. $(6, \pi/6)$ 14. $(5, 5\pi/3)$ 15. $(-2, 135^\circ)$ 16. $(-3, 120^\circ)$
 17. $(-1, -\pi/3)$ 18. $(-3, -3\pi/4)$ 19. $(-2, -\pi)$ 20. $(-3, -\pi/2)$

In Problems 21–28, 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) $r > 0, 2\pi \leq \theta < 4\pi$

21. $(5, 2\pi/3)$ 22. $(4, 3\pi/4)$ 23. $(-2, 3\pi)$ 24. $(-3, 4\pi)$
 25. $(1, \pi/2)$ 26. $(2, \pi)$ 27. $(-3, -\pi/4)$ 28. $(-2, -2\pi/3)$

In Problems 29–44, polar coordinates of a point are given. Find the rectangular coordinates of each point.

29. $(3, \pi/2)$ 30. $(4, 3\pi/2)$ 31. $(-2, 0)$ 32. $(-3, \pi)$
 33. $(6, 150^\circ)$ 34. $(5, 300^\circ)$ 35. $(-2, 3\pi/4)$ 36. $(-3, 2\pi/3)$
 37. $(-1, -\pi/3)$ 38. $(-3, -3\pi/4)$ 39. $(-2, -180^\circ)$ 40. $(-3, -90^\circ)$
 41. $(7.5, 110^\circ)$ 42. $(-3.1, 182^\circ)$ 43. $(6.3, 3.8)$ 44. $(8.1, 5.2)$

In Problems 45–56, the rectangular coordinates of a point are given. Find polar coordinates for each point.

45. $(3, 0)$ 46. $(0, 2)$ 47. $(-1, 0)$ 48. $(0, -2)$
 49. $(1, -1)$ 50. $(-3, 3)$ 51. $(\sqrt{3}, 1)$ 52. $(-2, -2\sqrt{3})$
 53. $(1.3, -2.1)$ 54. $(-0.8, -2.1)$ 55. $(8.3, 4.2)$ 56. $(-2.3, 0.2)$