AUC apCalculus BC

Classwork Assignment GP3.CW1

In Exercises 27–36, convert the rectangular equation to polar form and sketch its graph.

27. $x^2 + y^2 = 9$

28. $x^2 - y^2 = 9$

29. $x^2 + y^2 = a^2$

30. $x^2 + y^2 - 2ax = 0$

31. $y = 8$

32. $x = 12$

33. $3x - y + 2 = 0$

34. $xy = 4$

35. $y^2 = 9x$

36. $(x^2 + y^2)^2 - 9(x^2 - y^2) = 0$

In Exercises 37–46, convert the polar equation to rectangular form and sketch its graph.

37. $r = 4$

38. $r = -5$

39. $r = 3 \sin \theta$

40. $r = 5 \cos \theta$

41. $r = \theta$

42. $\theta = \dfrac{5\pi}{6}$

43. $r = 3 \sec \theta$

44. $r = 2 \csc \theta$

45. $r = \sec \theta \tan \theta$

46. $r = \cot \theta \csc \theta$