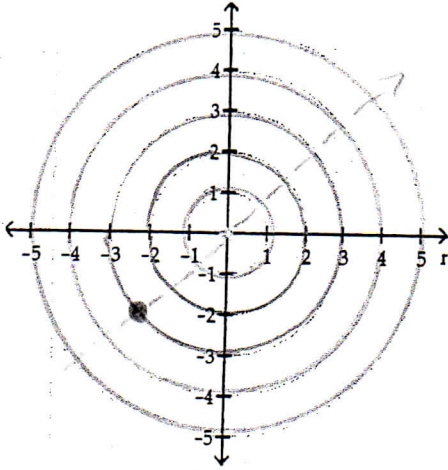
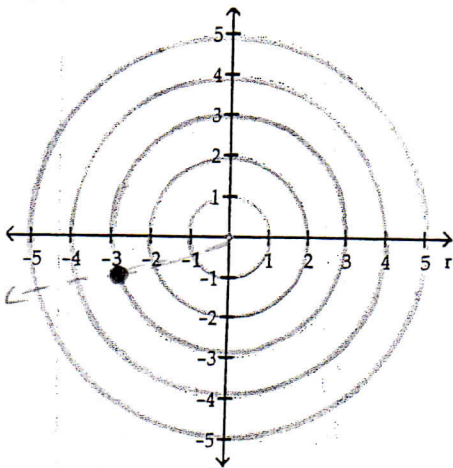


Plot the point given in polar coordinates.

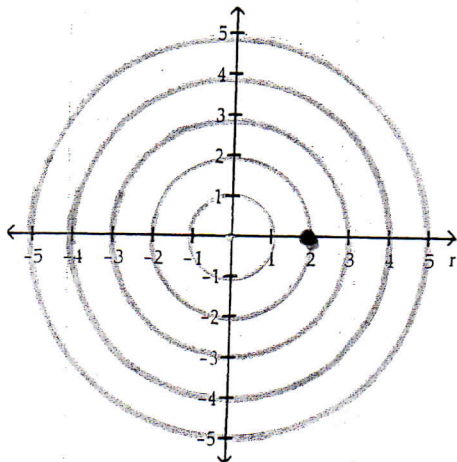
1)  $(-2, 45^\circ)$



2)  $(3, \frac{7\pi}{6})$

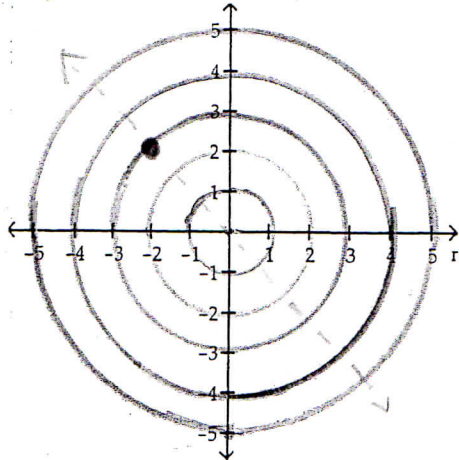


3)  $(2, 360^\circ)$



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

4)



The polar coordinates of a point are given. Find the rectangular coordinates of the point.

5)  $\left(5, -\frac{4\pi}{3}\right)$

5)  $\left(\frac{-5}{2}, \frac{5\sqrt{3}}{2}\right)$

6)  $(-3, 120^\circ)$

6)  $\left(\frac{3}{2}, \frac{-3\sqrt{3}}{2}\right)$

7)  $\left(7, \frac{3\pi}{4}\right)$

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

8)  $(5, 180^\circ)$

8)  $(-5, 0)$

9)  $(4, 70^\circ)$  Round the rectangular coordinates to two decimal places.

9)  $(1.37, 3.76)$

The letters  $r$  and  $\theta$  represent polar coordinates. Write the equation using rectangular coordinates  $(x, y)$ .

10)  $r = 1 + 2 \sin \theta$

10)  $x^2 + y^2 = \sqrt{x^2 + y^2} + 2y$

11)  $r = 2(\sin \theta - \cos \theta)$

11)  $x^2 + y^2 = 2y - 2x$

The rectangular coordinates of a point are given. Find polar coordinates for the point.

12)  $(-4, 4)$

A)  $\left(-4\sqrt{2}, -\frac{3\pi}{4}\right)$

B)  $\left(4\sqrt{2}, -\frac{3\pi}{4}\right)$

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

D)  $\left(4\sqrt{2}, \frac{3\pi}{4}\right)$

12) D

13)  $(0, -4)$

A)  $(4, 0)$

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

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

D)  $(4, \pi)$

13) C

14)  $(-3, 1.8)$  Round the polar coordinates to two decimal places, if necessary, with  $\theta$  in radians.

A)  $(-3.5, 1.03)$

B)  $(3.5, -1.03)$

C)  $(3.5, 2.6)$

D)  $(3.5, 1.03)$

14) C

The letters  $x$  and  $y$  represent rectangular coordinates. Write the equation using polar coordinates  $(r, \theta)$ .

15)  $2x + 3y = 6$

15) \_\_\_\_\_

$r(2\cos\theta + 3\sin\theta) = 6$