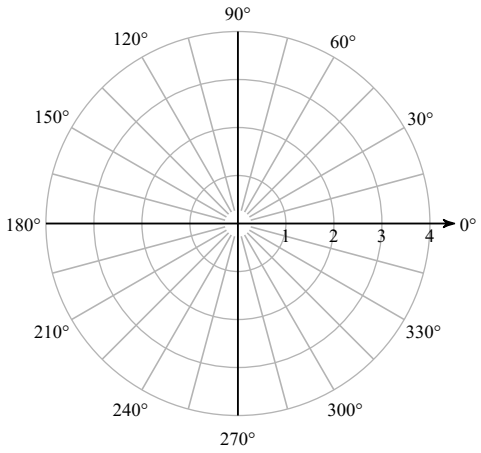
Polar Unit Name_____ ID: 1

Extra Practice

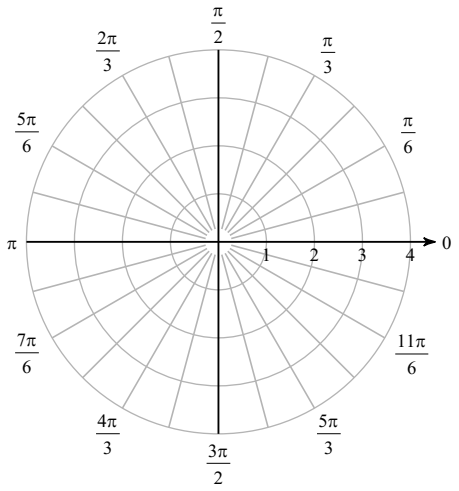
Date_____ Period____

Plot the point with the given polar coordinates. State the three other pairs of polar coordinates for each point.

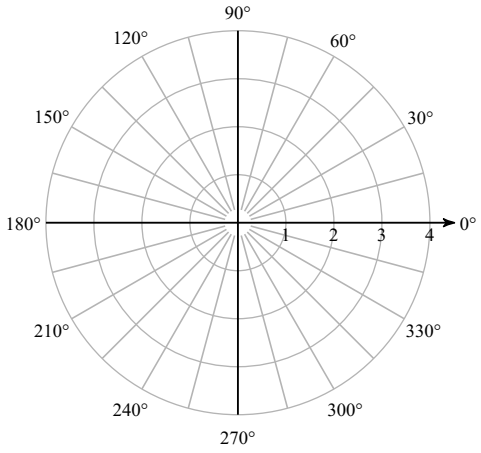
1) (4, 330°)



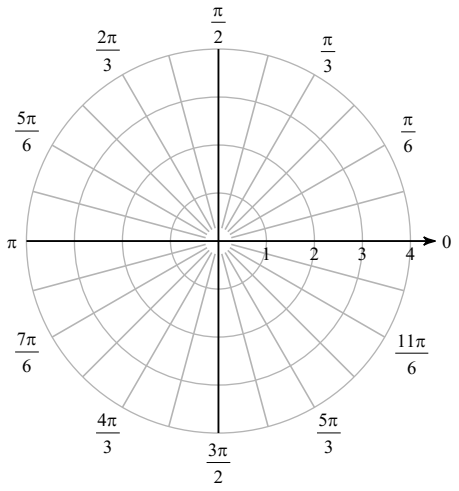
2) $\left(3, -\frac{4\pi}{3}\right)$



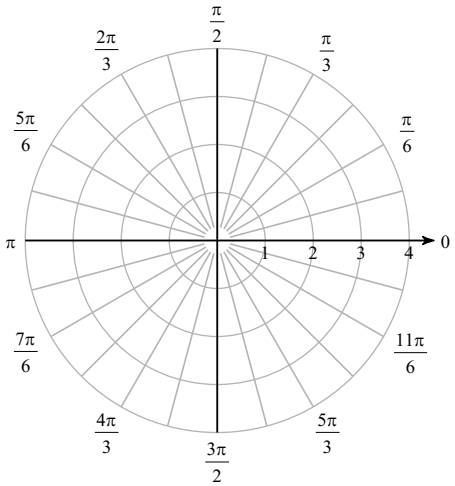
3) (–3, 30°)



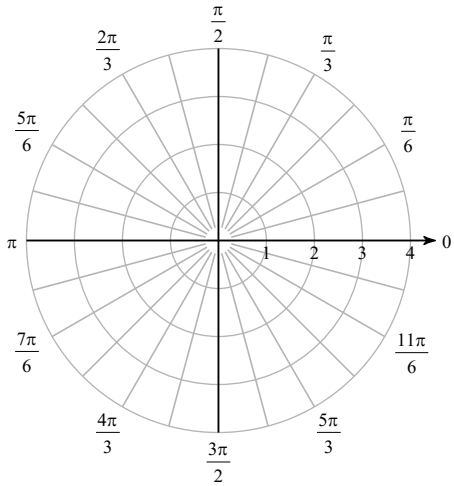
4) $\left(2, \frac{11\pi}{12}\right)$



5) $\left(3, -\frac{19\pi}{12}\right)$



6) $\left(-1, \frac{11\pi}{12}\right)$



Convert each pair of polar coordinates to rectangular coordinates.

7) $\left(-2, \frac{11\pi}{6}\right)$

8) $\left(1, \frac{3\pi}{4}\right)$

9) $\left(-1, \frac{3\pi}{2}\right)$

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

Convert each pair of rectangular coordinates to polar coordinates where $r > 0$ and $0 \le \theta < 2\pi$.

11) $\left(-\frac{1}{2}, \frac{\sqrt{3}}{2}\right)$

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

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

14) $\left(0, -1\right)$

Convert each equation from rectangular to polar form.

15) $(x-2)^2 + (y-1)^2 = 5$

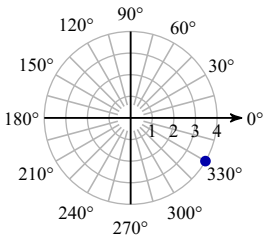
16) $x^2 + (y-1)^2 = 1$

17) $(x+2)^2 + (y-1)^2 = 5$

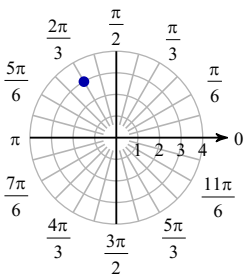
18) $(x+3)^2 + y^2 = 9$

Answers to Extra Practice (ID: 1)

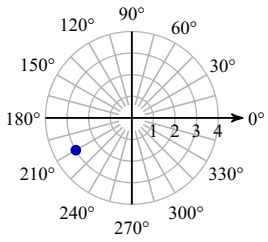
1)



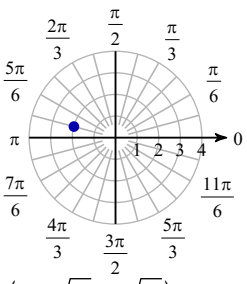
2)



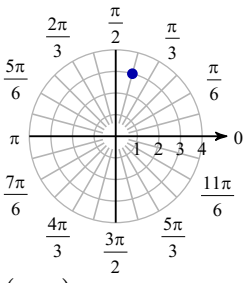
3)



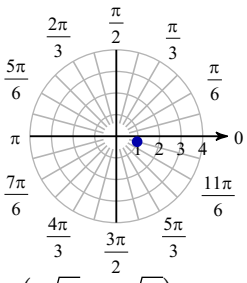
4)



5)



6)



7) $\left(-\sqrt{3}, 1\right)$

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

9) $(0, 1)$

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

11) $\left(1, \frac{2\pi}{3}\right)$

12) $\left(2, \frac{5\pi}{4}\right)$

13) $\left(3, \frac{7\pi}{6}\right)$

14) $\left(1, \frac{3\pi}{2}\right)$

15) $r = 4\cos\theta + 2\sin\theta$

16) $r = 2\sin\theta$

17) $r = -4\cos\theta + 2\sin\theta$

18) $r = -6\cos\theta$