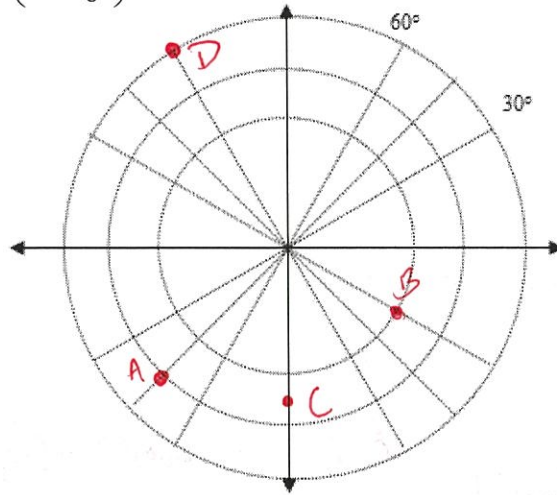


Name: key

9.1 Practice

For 1-4, graph each polar coordinate.

- 1) A $(2, 225^\circ)$ 2) B $\left(-1, \frac{5\pi}{6}\right)$ 3) C $(1.5, -90^\circ)$ 4) D $\left(-3, -\frac{\pi}{3}\right)$



For 5 & 6, find 3 additional pair of polar coordinates.

5) $\left(-2, \frac{\pi}{6}\right)$ $\left(2, \frac{7\pi}{6}\right)$ $\left(2, -\frac{5\pi}{6}\right)$

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

6) $(4, 300^\circ)$

$\left(4, 300^\circ\right)$

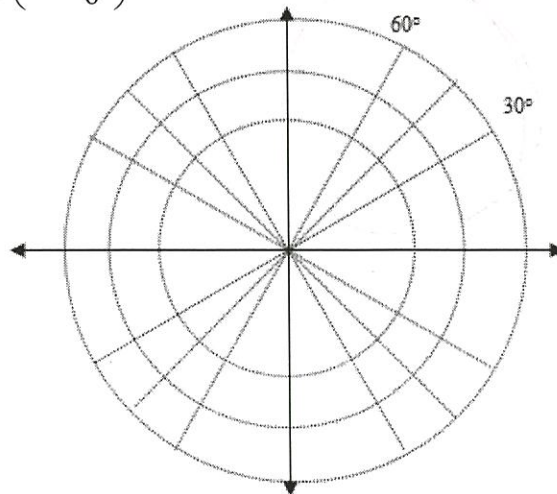
$(-4, 120^\circ)$ $(4, -60^\circ)$
 $(-4, -240^\circ)$

Name: _____

9.1 Practice

For 1-4, graph each polar coordinate.

- 1) A $(2, 225^\circ)$ 2) B $\left(-1, \frac{5\pi}{6}\right)$ 3) C $(1.5, -90^\circ)$ 4) D $\left(-3, -\frac{\pi}{3}\right)$



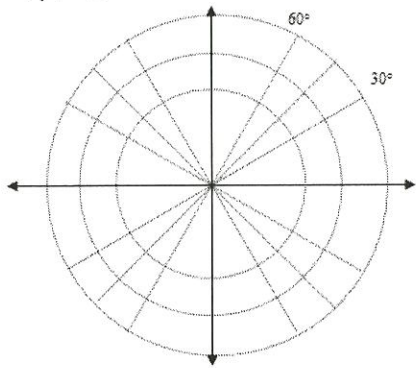
For 5 & 6, find 3 additional pair of polar coordinates.

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

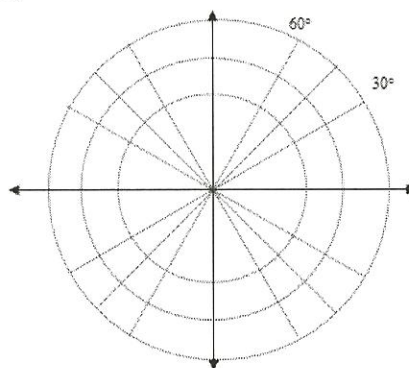
6) $(4, 300^\circ)$

For 7-9, use your graphing calculator to sketch the graph of each.

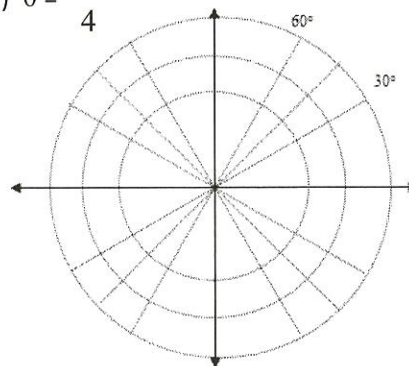
7) $r = 3$



8) $r = -2$



9) $\theta = \frac{3\pi}{4}$



For 10 & 11, determine the distance between the two polar points.

10) $(2, 240^\circ)$ & $(-1, 30^\circ)$

$$d = \sqrt{(2)^2 + (-1)^2 - 2(2)(-1)\cos(30 - 240)}$$

$$= \sqrt{4 + 1 + 4\cos(-210^\circ)}$$

$$= \sqrt{5 + 4\cos(150^\circ)}$$

$$= \sqrt{5 + 4\left(\frac{\sqrt{3}}{2}\right)}$$

$$\sqrt{5 + 2\sqrt{3}}$$

11) $\left(10, \frac{7\pi}{6}\right)$ & $\left(5, \frac{5\pi}{3}\right)$

$$d = \sqrt{100 + 25 - 2(10)(5)\cos\left(\frac{5\pi}{3} - \frac{7\pi}{6}\right)}$$

$$= \sqrt{125 - 100\cos\left(\frac{\pi}{2}\right)}$$

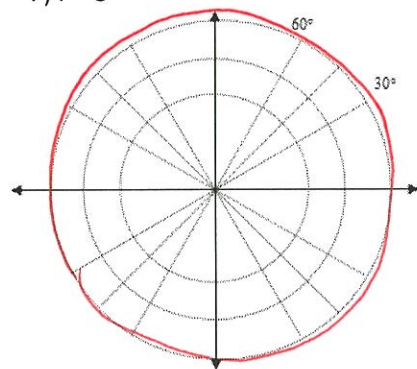
$$= \sqrt{125 - 100(0)}$$

$$= \sqrt{125}$$

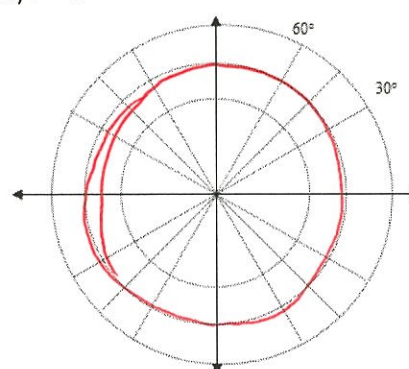
$$= 5\sqrt{5}$$

For 7-9, use your graphing calculator to sketch the graph of each.

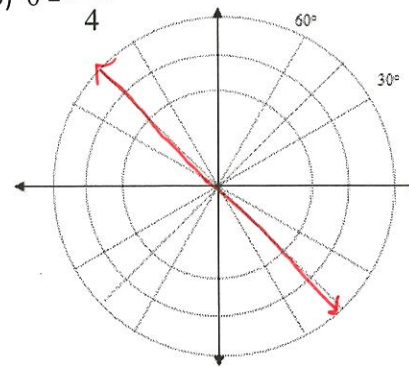
7) $r = 3$



8) $r = -2$



9) $\theta = \frac{3\pi}{4}$



For 10 & 11, determine the distance between the two polar points.

10) $(2, 240^\circ)$ & $(-1, 30^\circ)$

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