

10.3 A

Find 3 additional pairs of polar coordinates that describe the same point as the provided polar coordinates.

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

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

Convert each pair of polar coordinates to rectangular coordinates.

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

8)  $\left(1, \frac{7\pi}{6}\right)$

9)  $(3, 0)$

10)  $\left(2, \frac{5\pi}{3}\right)$

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

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

12)  $(-3, 0)$

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

14)  $(-2, 2\sqrt{3})$

Two points are specified using polar coordinates. Find the distance between the points. Hint: convert to rectangular coordinates first then use a formula - you know - one that finds distance. ;)

21)  $\left(2, \frac{\pi}{6}\right), \left(4, \frac{\pi}{3}\right)$

22)  $\left(3, \frac{7\pi}{4}\right), \left(1, \frac{\pi}{4}\right)$

