

3.1 Inverse Values $[0, 2\pi)$

Name: _____

Find the exact value(s) of θ (in radians), where $0 \leq \theta < 2\pi$

1. $\theta = \cos^{-1}\left(-\frac{\sqrt{3}}{2}\right)$

$\frac{5\pi}{6}, \frac{7\pi}{6}$

2. $\theta = \sin^{-1}\left(\frac{\sqrt{3}}{2}\right)$

$\frac{\pi}{3}, \frac{2\pi}{3}$

3. $\theta = \arcsin\left(-\frac{1}{2}\right)$

$\frac{7\pi}{6}, \frac{11\pi}{6}$

4. $\cos \theta = \left(-\frac{1}{\sqrt{2}}\right)$

$\frac{3\pi}{4}, \frac{5\pi}{4}$

5. $\theta = \arctan(1)$

$\frac{\pi}{4}, \frac{5\pi}{4}$

6. $\theta = \arcsin(1)$

$\frac{\pi}{2}$

7. $\theta = \cos^{-1}(-1)$

π

8. $\theta = \sin^{-1}(0)$

$0, \pi$

9. $\tan \theta = (-1)$

$\frac{3\pi}{4}, \frac{7\pi}{4}$

10. $\theta = \arccos\left(\frac{1}{2}\right)$

$\frac{\pi}{3}, \frac{5\pi}{3}$

11. $\sin \theta = (-1)$

$\frac{3\pi}{2}$

12. $\theta = \cos^{-1}(0)$

$\frac{\pi}{2}, \frac{3\pi}{2}$

13. $\theta = \cot^{-1}\left(-\frac{\sqrt{3}}{1}\right)$ Adj
Opp

$\frac{5\pi}{6}, \frac{11\pi}{6}$

14. $\theta = \arccos\left(-\frac{\sqrt{2}}{2}\right)$

$\frac{3\pi}{4}, \frac{5\pi}{4}$

15. $\tan \theta = \left(\frac{-\sqrt{3}}{3}\right)$

$-\frac{\sqrt{3}}{3} = -\frac{1}{\sqrt{3}}$
 $\frac{5\pi}{6}, \frac{11\pi}{6}$

