Accel Math III Practice Worksheet #2: Inverse Trig Functions Name _____

Unit 5: Graphs and Inverse of Trig Functions

Lesson 9: Inverse Trig Functions MA3A8

Find the exact value for each. Leave ratios in terms of radicals. State angles in terms of π radians. It will help to sketch your angle for each problem.

1. $\cos\left(\sin^{-1}\frac{\sqrt{2}}{2}\right)$
2. $\sin\left(\cos^{-1}\frac{1}{2}\right)$
3. $\tan\left[\cos^{-1}\left(-\frac{\sqrt{3}}{2}\right)\right]$
4. $\tan\left[\sin^{-1}\left(-\frac{1}{2}\right)\right]$
5. $\sec\left(\cos^{-1}\frac{1}{2}\right)$
6. $\cot\left[\sin^{-1}\left(-\frac{1}{2}\right)\right]$
7. $\csc\left(\tan^{-1}1\right)$
8. $\sec\left(\tan^{-1}\sqrt{3}\right)$
9. $\sin\left[\tan^{-1}(-1)\right]$
10. $\cos\left[\sin^{-1}\left(-\frac{\sqrt{3}}{2}\right)\right]$
11. $\sec\left[\sin^{-1}\left(-\frac{1}{2}\right)\right]$
12. $\csc\left[\cos^{-1}\left(-\frac{\sqrt{3}}{2}\right)\right]$
13. $\cos^{-1}\left(\cos\frac{5\pi}{4}\right)$
14. $\tan^{-1}\left(\tan\frac{2\pi}{3}\right)$
15. $\sin^{-1}\left[\sin\left(-\frac{7\pi}{6}\right)\right]$
16. $\cos^{-1}\left[\cos\left(-\frac{\pi}{3}\right)\right]$
17. $\tan\left(\sin^{-1}\frac{1}{3}\right)$
18. $\tan\left(\cos^{-1}\frac{1}{3}\right)$
19. $\sec\left(\tan^{-1}\frac{1}{2}\right)$
20. $\cos\left(\sin^{-1}\frac{\sqrt{2}}{3}\right)$
21. $\cot\left[\sin^{-1}\left(-\frac{\sqrt{2}}{3}\right)\right]$
22. $\csc\left[\tan^{-1}(-2)\right]$
23. $\sin\left[\tan^{-1}(-3)\right]$
24. $\cot\left[\cos^{-1}\left(-\frac{\sqrt{3}}{3}\right)\right]$
25. $\sec\left(\sin^{-1}\frac{2\sqrt{5}}{5}\right)$
26. $\csc\left(\tan^{-1}\frac{1}{2}\right)$
27. $\sin^{-1}\left(\cos\frac{3\pi}{4}\right)$
28. $\cos^{-1}\left(\sin\frac{7\pi}{6}\right)$

29. $\sin\left(\cos^{-1}\frac{1}{5}\right)$

30. $\tan\left(\arcsin\frac{12}{13}\right)$

31. $\cos\left(\sin^{-1}\left(\frac{-4}{5}\right)\right)$

32. $\tan\left(\arccos\left(\frac{-3}{4}\right)\right)$