

**Inverse Trig Functions &
Composite Trig Functions Worksheet**

Name _____

Directions: Write the exact trigonometric value of the following problems.

1. $\cos^{-1}\frac{\sqrt{3}}{2}$

2. $\sin^{-1}\frac{\sqrt{2}}{2}$

3. $\arcsin(-1)$

4. $\cos^{-1}(-1)$

5. $\arctan(1)$

6. $\tan^{-1}(-1)$

7. $\arcsin\left(-\frac{\sqrt{2}}{2}\right)$

8. $\tan^{-1}\sqrt{3}$

9. $\arccos\frac{1}{2}$

10. $\tan^{-1}\left(-\frac{\sqrt{3}}{3}\right)$

11. $\arccos\left(-\frac{\sqrt{2}}{2}\right)$

12. $\cos^{-1}0$

13. $\tan^{-1}(0)$

14. $\cot^{-1}0$

15. $\cos^{-1}2$

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

17. $\sin\left(\cos^{-1}\left(-\frac{1}{2}\right)\right)$

18. $\tan(\sin^{-1}0)$

19. $\cot(\cos^{-1} 0)$

20. $\sin^{-1}\left(\cos\left(\frac{7\pi}{6}\right)\right)$

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

22. $\cos^{-1}\left(\sin\left(\frac{\pi}{6}\right)\right)$

23. $\sin^{-1}\left(\cos\left(\frac{5\pi}{3}\right)\right)$

24. $\tan^{-1}\left(\sin\left(\frac{\pi}{2}\right)\right)$

25. $\tan^{-1}\left(\cos\left(\frac{\pi}{2}\right)\right)$

26. $\sin^{-1}\left(\sin\left(\frac{3\pi}{4}\right)\right)$

27. $\cos^{-1}\left(\sin\left(-\frac{\pi}{3}\right)\right)$

28. $\cos\left(\sin^{-1}\left(\frac{8}{17}\right)\right)$

29. $\sin\left(\cos^{-1}\left(\frac{5}{13}\right)\right)$

30. $\tan\left(\cos^{-1}\left(\frac{3}{5}\right)\right)$

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

32. $\tan\left(\sin^{-1}\left(\cos\left(\frac{\pi}{2}\right)\right)\right)$