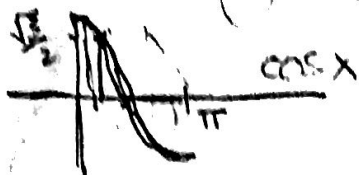


Inverse Trig Functions &
Composite Trig Functions Worksheet

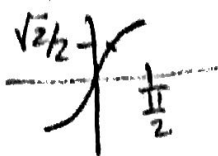
Name Key

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

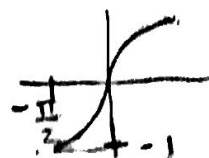
1. $\cos^{-1}\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{6}$



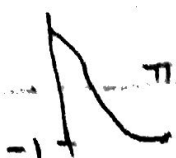
2. $\sin^{-1}\frac{\sqrt{2}}{2} = \frac{\pi}{4}$



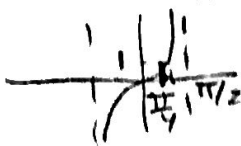
3. $\arcsin(-1) = -\frac{\pi}{2}$



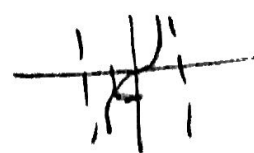
4. $\cos^{-1}(-1) = \pi$



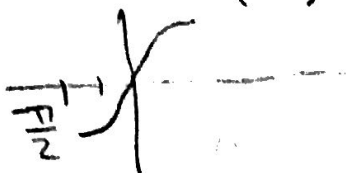
5. $\arctan(1) = \frac{\pi}{4}$



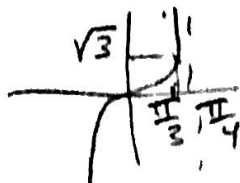
6. $\tan^{-1}(-1) = -\frac{\pi}{4}$



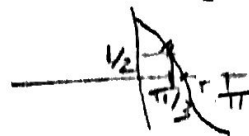
7. $\arcsin\left(-\frac{\sqrt{2}}{2}\right) = -\frac{\pi}{4}$



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



9. $\arccos\frac{1}{2} = \frac{\pi}{3}$



10. $\tan^{-1}\left(-\frac{\sqrt{3}}{3}\right) = -\frac{\pi}{6}$

11. $\arccos\left(-\frac{\sqrt{2}}{2}\right) = \frac{3\pi}{4}$

12. $\cos^{-1}0 = \frac{\pi}{2}$

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

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

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

$(-1 \leq \cos \theta \leq 1)$

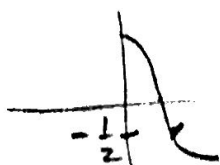
16. $\cos\left(\sin^{-1}\left(\frac{\sqrt{3}}{2}\right)\right)$

$\cos\left(\frac{\pi}{3}\right) = \frac{1}{2}$



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

$\sin\left(\frac{2\pi}{3}\right) = \frac{\sqrt{3}}{2}$



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

$\tan 0 = 0$