

Mad Math Minute!

Name: _____

Date: _____

Answer choices for $\sin(\sin^{-1}(x))$: x or undefined

Answer choices for $\sin^{-1}(\sin(x))$: x or "the other angle" or undefined

1. $\sin\left(\sin^{-1}\left(\frac{1}{3}\right)\right)$ $\frac{1}{3}$	2. $\sin(\sin^{-1}(2.3))$ undefined	3. $\tan\left(\tan^{-1}\left(\frac{1}{2}\right)\right)$ $\frac{1}{2}$
4. $\cos\left(\cos^{-1}\left(-\frac{\sqrt{2}}{2}\right)\right)$ $-\frac{\sqrt{2}}{2}$	5. $\tan\left(\tan^{-1}(-1)\right)$ -1	6. $\cos\left(\cos^{-1}(3)\right)$ undefined
7. $\sin\left(\sin^{-1}(-1)\right)$ undefined	8. $\cos\left(\cos^{-1}\left(\frac{\sqrt{3}}{2}\right)\right)$ $\frac{\sqrt{3}}{2}$	9. $\tan\left(\tan^{-1}(5)\right)$ 5
10. $\sin^{-1}\left(\sin\left(\frac{2\pi}{3}\right)\right)$ other angle	11. $\cos^{-1}\left(\cos\left(\frac{3\pi}{4}\right)\right)$ $\frac{3\pi}{4}$	12. $\tan^{-1}\left(\tan\left(-\frac{\pi}{3}\right)\right)$ $-\frac{\pi}{3}$
13. $\tan^{-1}\left(\tan\left(\frac{\pi}{2}\right)\right)$ undefined	14. $\sin^{-1}(\sin(0))$ 0	15. $\cos^{-1}\left(\cos\left(-\frac{\pi}{4}\right)\right)$ other angle
16. $\sin^{-1}\left(\sin\left(-\frac{\pi}{3}\right)\right)$ $-\frac{\pi}{3}$	17. $\tan^{-1}\left(\tan\left(\frac{5\pi}{6}\right)\right)$ other angle	18. $\cos^{-1}\left(\cos\left(\frac{11\pi}{12}\right)\right)$ $\frac{11\pi}{12}$