Find the exact value of each expression. If there is no value say “not defined”.

1.) arcsin (0)

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

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

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

5.) $\sin^{-1}\left(\sin\left(\frac{9\pi}{8}\right)\right)$

6.) $\tan^{-1}\left(\tan\left(\frac{4\pi}{5}\right)\right)$

7.) $\cos\left(\cos^{-1}(1.2)\right)$

8.) $\tan\left(\tan^{-1}(4)\right)$

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

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

11.) $\csc\left(\tan^{-1}(1)\right)$

12.) $\sec\left(\sin^{-1}\left(\frac{-1}{2}\right)\right)$

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

14.) $\sec\left(\sin^{-1}\left(\frac{2\sqrt{5}}{5}\right)\right)$

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

Answers.

1.) 0

2.) 0

3.) $\frac{\pi}{4}$

4.) $\frac{\pi}{3}$

5.) $\frac{-\pi}{8}$

6.) $\frac{-\pi}{5}$

7.) Not Defined

8.) 4

9.) $\frac{\sqrt{2}}{2}$

10.) $\frac{-\sqrt{3}}{3}$

11.) $\sqrt{2}$

12.) $\frac{2\sqrt{3}}{3}$

13.) $\frac{3\pi}{4}$

14.) $\sqrt{5}$

15.) $\frac{-\pi}{4}$