Pre Calc 4.6 Practice

Find the exact value of each expression if it exists

1. $\sin^{-1}\frac{\sqrt{3}}{2}$ $\frac{\pi}{3}$
2. $\cos^{-1}\frac{1}{2}$ $\frac{\pi}{3}$
3. $\arcsin\left(-\frac{\sqrt{2}}{2}\right)$ $-\frac{\pi}{4}$
4. $\arctan 1$ $\frac{\pi}{4}$
5. $\cos^{-1}1$ 0
6. $\sin^{-1}\pi$ DNE
7. $\csc^{-1}(-2)$ $-\frac{\pi}{6}$
8. $\tan^{-1}\left(-\sqrt{3}\right)$ $-\frac{\pi}{3}$
9. $\sin^{-1}\left(\sin\frac{\pi}{4}\right)$ $\frac{\pi}{4}$
10. $\tan^{-1}\left(\tan\frac{\pi}{2}\right)$ DNE
11. $\cos\left(\cos^{-1}\frac{2}{3}\right)$ $\frac{2}{3}$
12. $\cos^{-1}\left(\cos\frac{3\pi}{2}\right)$ $\frac{\pi}{2}$
13. $\sin^{-1}\left(\cos\frac{\pi}{6}\right)$ $\frac{\pi}{3}$
14. $\cos\left(\arcsin\frac{1}{2}\right)$ $\frac{\sqrt{3}}{2}$
15. $\tan\left(\arcsin-\frac{1}{2}\right)$ $-\frac{\sqrt{3}}{3}$
16. $\cos(\arccos 2)$ DNE
17. $\cos\left(\arctan-\frac{\sqrt{3}}{3}\right)$ $\frac{\sqrt{3}}{2}$
18. $\arcsin\left(-\frac{\sqrt{3}}{2}\right)$ $-\frac{\pi}{3}$
19. $\cos^{-1}\left(\cos\frac{\pi}{3}\right)$ $\frac{\pi}{3}$
20. $\tan^{-1}\left(-\frac{3\pi}{2}\right)$ not on unit circle
21. $\sin^{-1}\left(\cos\frac{\pi}{3}\right)$ $\frac{\pi}{6}$
22. $\arctan\left(-\frac{\sqrt{3}}{3}\right)$ $-\frac{\pi}{6}$
23. $\arcsin\left(-\frac{1}{2}\right)$ $-\frac{\pi}{6}$
24. $\tan\left(\sin^{-1}1-\cos^{-1}\frac{1}{2}\right)$

$\tan\left(\frac{\pi}{2}-\frac{\pi}{3}\right)$

$\tan\left(\frac{\pi}{6}\right)=\frac{\sqrt{3}}{3}$

25. $\sin\left(\arctan-\frac{\sqrt{3}}{3}\right)$

$\sin\left(-\frac{\pi}{6}\right)=-\frac{1}{2}$