

Calculate the exact value of each of the following.

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

2. $\cos \frac{\pi}{4} = \frac{\sqrt{2}}{2}$

3. $\tan \frac{\pi}{4} = 1$

4. $\cos 210^\circ = -\frac{\sqrt{3}}{2}$

5. $\sin 300^\circ = -\frac{\sqrt{3}}{2}$

6. $\tan 330^\circ = -\frac{\sqrt{3}}{3}$

7. $\sin \frac{3\pi}{4} = \frac{\sqrt{2}}{2}$

8. $\cos \frac{3\pi}{4} = -\frac{\sqrt{2}}{2}$

9. $\tan \frac{3\pi}{4} = -1$

10. $\sin 90^\circ = 1$

11. $\cos 270^\circ = 0$

12. $\tan 45^\circ = 1$

13. $\cos \frac{3\pi}{2} = 0$

14. $\tan \frac{3\pi}{2} = \text{undefined}$

15. $\sin \frac{3\pi}{2} = -1$

16. $\sin -450^\circ = -1$

17. $\tan \frac{19\pi}{6} = \frac{\sqrt{3}}{3}$

18. $\cos 405^\circ = \frac{\sqrt{2}}{2}$

19. $\tan 810^\circ = \text{undefined}$

20. $\cos -\frac{9\pi}{4} = \frac{\sqrt{2}}{2}$

21. $\sin -690^\circ = \frac{1}{2}$

22. $\tan -\frac{7\pi}{6} = -\frac{\sqrt{3}}{3}$

23. $\cos \frac{25\pi}{3} = \frac{1}{2}$

24. $\sin -540^\circ = 0$

25. $\sin 90^\circ + \cos 90^\circ$

$1 + 0 = 1$

26. $\cos \frac{7\pi}{6} - \tan \frac{7\pi}{4}$

$-\frac{\sqrt{3}}{2} - (-1) = \frac{-\sqrt{3} + 2}{2}$

27. $\cos 135^\circ + \sin 780^\circ$

$-\frac{\sqrt{2}}{2} + \frac{\sqrt{3}}{2} = \frac{\sqrt{3} - \sqrt{2}}{2}$

28. $\tan 240^\circ + \cos \frac{\pi}{3}$

$\sqrt{3} + \frac{1}{2} = \frac{2\sqrt{3} + 1}{2}$