

II. Find each exact trig value. No Calculator!!

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

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

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

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

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

6. $\tan 330^\circ$

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

8. $\cos \frac{2\pi}{3}$ $\boxed{-\frac{1}{2}}$

9. $\tan \frac{7\pi}{6}$

10. $\sin 90^\circ$ $\boxed{1}$

11. $\csc 270^\circ$
 $\frac{1}{\sin 270^\circ} = \frac{1}{-1} = \boxed{-1}$

12. $\sec \frac{4\pi}{3}$ $\frac{1}{\cos \frac{4\pi}{3}} = \frac{1}{-\frac{1}{2}} = \boxed{-2}$

$\frac{-\frac{1}{2}}{-\frac{\sqrt{3}}{2}} = \frac{-\frac{1}{2} \cdot \frac{2}{\sqrt{3}}}{-\frac{2}{\sqrt{3}}} = \frac{-\frac{1}{\sqrt{3}}}{-\frac{2}{\sqrt{3}}} = \frac{1}{2} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{\sqrt{3}}{2}$ $\boxed{\frac{\sqrt{3}}{2}}$

13. $\cot \frac{3\pi}{2} = \frac{0}{-1} = \boxed{0}$

14. $\sec(-240^\circ)$
 $\frac{1}{\cos 120^\circ} = \frac{1}{-\frac{1}{2}} = \boxed{-2}$

15. $\csc\left(-\frac{\pi}{6}\right)$
 $\frac{1}{\sin \frac{11\pi}{6}} = \frac{1}{-\frac{1}{2}} = \boxed{-2}$

16. $\cot 135^\circ$
 $\frac{\cos 135^\circ}{\sin 135^\circ} = \frac{-\frac{\sqrt{2}}{2}}{\frac{\sqrt{2}}{2}} = \boxed{-1}$

III. Evaluate. No calculator!!

17. $\sin 30^\circ - \cos 120^\circ$
 $\frac{1}{2} - \left(-\frac{1}{2}\right) = \boxed{1}$

18. $\sin 240^\circ \cos 330^\circ$
 $-\frac{\sqrt{3}}{2} \cdot \frac{\sqrt{3}}{2} = \boxed{-\frac{3}{4}}$

19. $\tan 180^\circ + \sec 330^\circ$
 $0 + \frac{2\sqrt{3}}{3} = \boxed{\frac{2\sqrt{3}}{3}}$

20. $\cos \frac{3\pi}{2} + \cos\left(-\frac{5\pi}{6}\right)$
 $0 + \cos \frac{5\pi}{6} = \boxed{-\frac{\sqrt{3}}{2}}$

21. $\sin\left(-\frac{\pi}{6}\right) \cos\left(-\frac{2\pi}{3}\right)$
 $\sin\left(\frac{11\pi}{6}\right) \cos\left(\frac{4\pi}{3}\right)$
 $\left(-\frac{1}{2}\right) \left(-\frac{1}{2}\right) = \boxed{\frac{1}{4}}$

22. $\cos(-90^\circ) + \tan 180^\circ$
 $\cos 270^\circ + \tan 180^\circ$
 $0 + \frac{0}{-1} = \boxed{0}$

23. $(\cos 180^\circ)(\tan 60^\circ)$
 $(-1) \left(\frac{\sqrt{3}}{1/2}\right)$
 $(-1) \left(\frac{\sqrt{3}}{2} \cdot \frac{2}{1}\right) = \boxed{-\sqrt{3}}$

24. $(\sec 210^\circ)(\csc 150^\circ)$
 $\frac{1}{\cos 210^\circ} \cdot \frac{1}{\sin 150^\circ}$
 $\frac{1}{-\frac{\sqrt{3}}{2}} \cdot \frac{1}{\frac{1}{2}}$
 $-\frac{2}{\sqrt{3}} \cdot \frac{2}{1} = -\frac{4}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \boxed{-\frac{4\sqrt{3}}{3}}$

25. $(\cot 30^\circ)(\sin 270^\circ)$
 $\frac{\cos 30^\circ}{\sin 30^\circ} (-1)$
 $\frac{\frac{\sqrt{3}}{2}}{\frac{1}{2}} (-1)$
 $\frac{\sqrt{3}}{2} \cdot \frac{2}{1} (-1) = \boxed{-\sqrt{3}}$