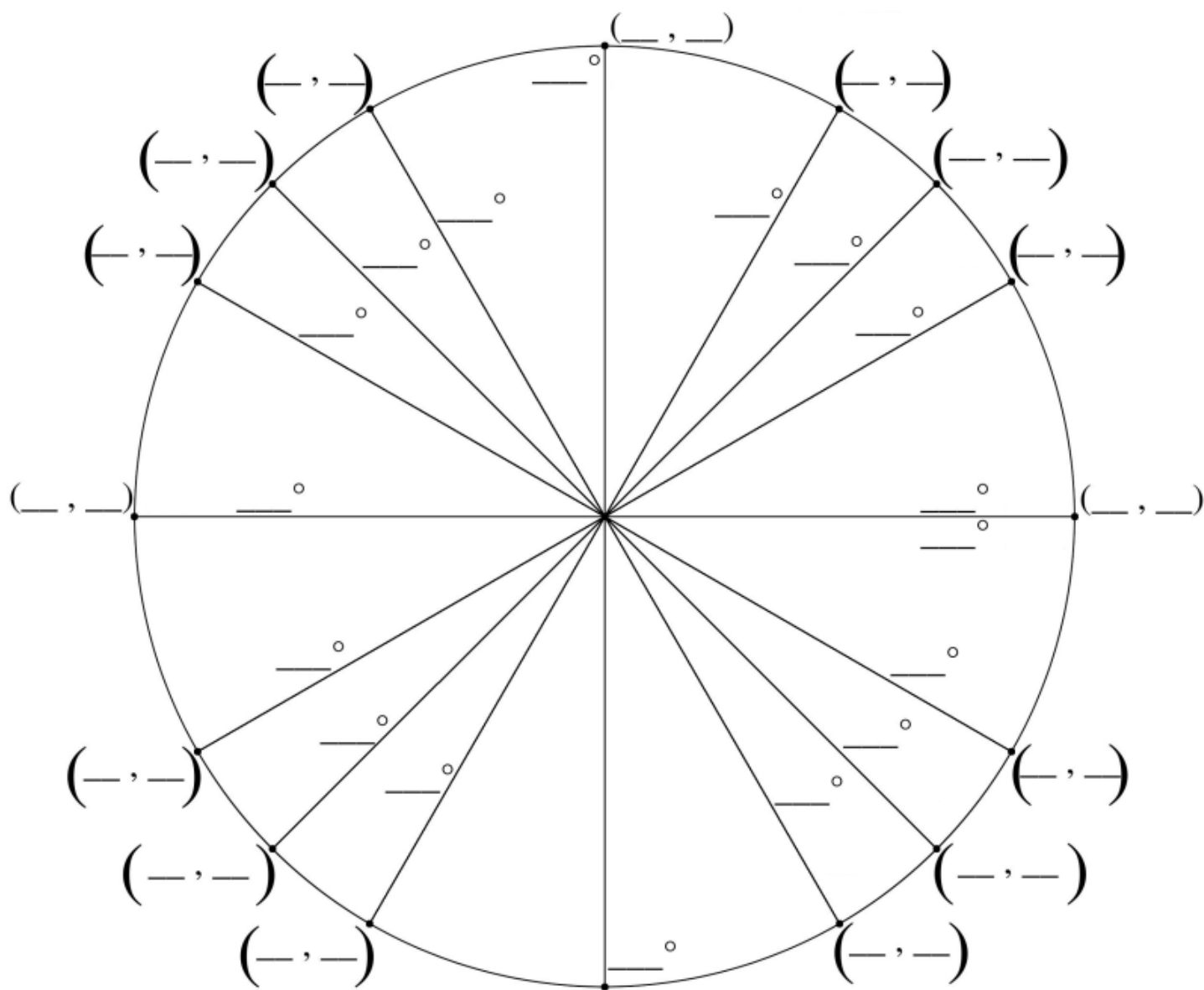


Pre-Calc AB: Trigonometry Review

1. Evaluate: $\tan^2\left(\frac{5\pi}{6}\right) + \sin^2\left(\frac{5\pi}{3}\right) - \cos^2\left(\frac{\pi}{6}\right)$
2. Evaluate: $\cos^2\left(\frac{5\pi}{4}\right) + \sin^2\left(\frac{5\pi}{6}\right) - \tan^2\left(\frac{2\pi}{3}\right)$
3. Evaluate: $\sin^2\left(\frac{\pi}{3}\right) + \cos^2\left(\frac{7\pi}{4}\right) - \tan^2\left(\frac{3\pi}{4}\right)$
4. Evaluate: $\tan^2\left(\frac{7\pi}{4}\right) + \cos^2\left(\frac{5\pi}{4}\right) - \sin^2\left(\frac{11\pi}{6}\right)$
5. Evaluate: $\sec\left(\frac{13\pi}{6}\right) + \csc\left(-\frac{7\pi}{3}\right) - \tan\left(-\frac{\pi}{6}\right)$
6. Evaluate: $\sec(30^\circ) + \csc(90^\circ) - \tan(45^\circ)$
7. Evaluate: $\sin(-150^\circ) + \cos(270^\circ) - \cot(-135^\circ)$
8. Evaluate: $\cos(-30^\circ) + \sec(180^\circ) - \tan(720^\circ)$
9. Evaluate: $\sec^2(45^\circ) + \csc^2(30^\circ) - \tan^2(-60^\circ)$
10. Evaluate exactly: $\sin(\arccos \frac{3}{4})$
11. Evaluate exactly: $\tan(\arcsin \frac{1}{6})$
12. Evaluate exactly: $\sec(\arctan 3)$
13. Evaluate exactly: $\arcsin(\sin \frac{5\pi}{4})$
14. Evaluate exactly: $\arccos(\cos -\frac{\pi}{4})$
15. Evaluate exactly: $\arctan(\tan -\pi)$
16. Solve given $0 \leq \theta \leq 2\pi$: $4 \sin \theta + 1 = 1$
17. Solve given $0^\circ \leq \theta \leq 360^\circ$: $2 \cos \theta = -1$
18. Solve given $0^\circ \leq \theta \leq 360^\circ$: $\tan \theta = 1$
19. Solve given $0 \leq \theta \leq 2\pi$: $3 \cot \theta + 2 = 2$

20. Fill in the unit circle from memory:



1. $\frac{1}{3}$
2. $-\frac{9}{4}$
3. $\frac{1}{4}$
4. $\frac{5}{4}$
5. $\frac{\sqrt{3}}{3}$
6. $\frac{2\sqrt{3}}{3}$
7. $-\frac{3}{2}$
8. $\frac{\sqrt{3}-2}{2}$
9. 3
10. $\frac{\sqrt{7}}{4}$
11. $\frac{\sqrt{35}}{35}$
12. $\sqrt{10}$
13. $-\frac{\pi}{4}$
14. $\frac{3\pi}{4}$
15. 0
16. $0, \pi, 2\pi$
17. $120^\circ, 240^\circ$
18. $45^\circ, 225^\circ$
19. $\frac{\pi}{2}, \frac{3\pi}{2}$