

## Evaluating Trig Functions

Evaluate each of the following. Write your EXACT answer (no decimals!)

1.  $\tan \frac{\pi}{3} = \frac{\frac{\sqrt{3}}{2}}{\frac{1}{2}} = \frac{2\sqrt{3}}{2} = \sqrt{3}$

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

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

4.  $\sin \frac{\pi}{6} = \frac{1}{2}$

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

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

7.  $\cot \frac{\pi}{2} = 0$

8.  $\csc \frac{-7\pi}{3} = \csc -120^\circ = \csc -60^\circ = \frac{1}{\sin -60^\circ} = \frac{1}{-\frac{\sqrt{3}}{2}} = -\frac{2}{\sqrt{3}}$

$\cos -\frac{2}{\sqrt{3}} \left( \frac{\sqrt{3}}{\sqrt{3}} \right) = -\frac{2\sqrt{3}}{3}$

9.  $\sec \frac{-3\pi}{4} = \frac{1}{\cos -135^\circ} = \frac{1}{-\frac{\sqrt{2}}{2}} = -\frac{2}{\sqrt{2}} = -\frac{2\sqrt{2}}{2} = -\sqrt{2}$

10.  $\tan \frac{-9\pi}{2} = \text{undef}$

11.  $\cot \frac{23\pi}{6} = -\sqrt{3}$

12.  $\sec \frac{-10\pi}{3} = -2$

13.  $\sin \frac{-23\pi}{6} = \frac{1}{2}$

14.  $\csc \frac{-\pi}{4} = -\sqrt{2}$

15.  $\cos \frac{13\pi}{3} = \frac{1}{2}$

16.  $\cot -\pi = \text{undef}$

17.  $\cos \frac{-7\pi}{4} = \frac{\sqrt{2}}{2}$

18.  $\sec \frac{-5\pi}{2} = \text{undef}$

19.  $\sin \frac{5\pi}{3} = -\frac{\sqrt{3}}{2}$

20.  $\csc \frac{10\pi}{3} = -\frac{2\sqrt{3}}{3}$

# Trigonometric Functions Maze

**Directions:** Every angle has a match. Pick three different colors, shade sine angles and measures in one color, cosine angles and measures in a second color and tangent angles and measures in the third color.

