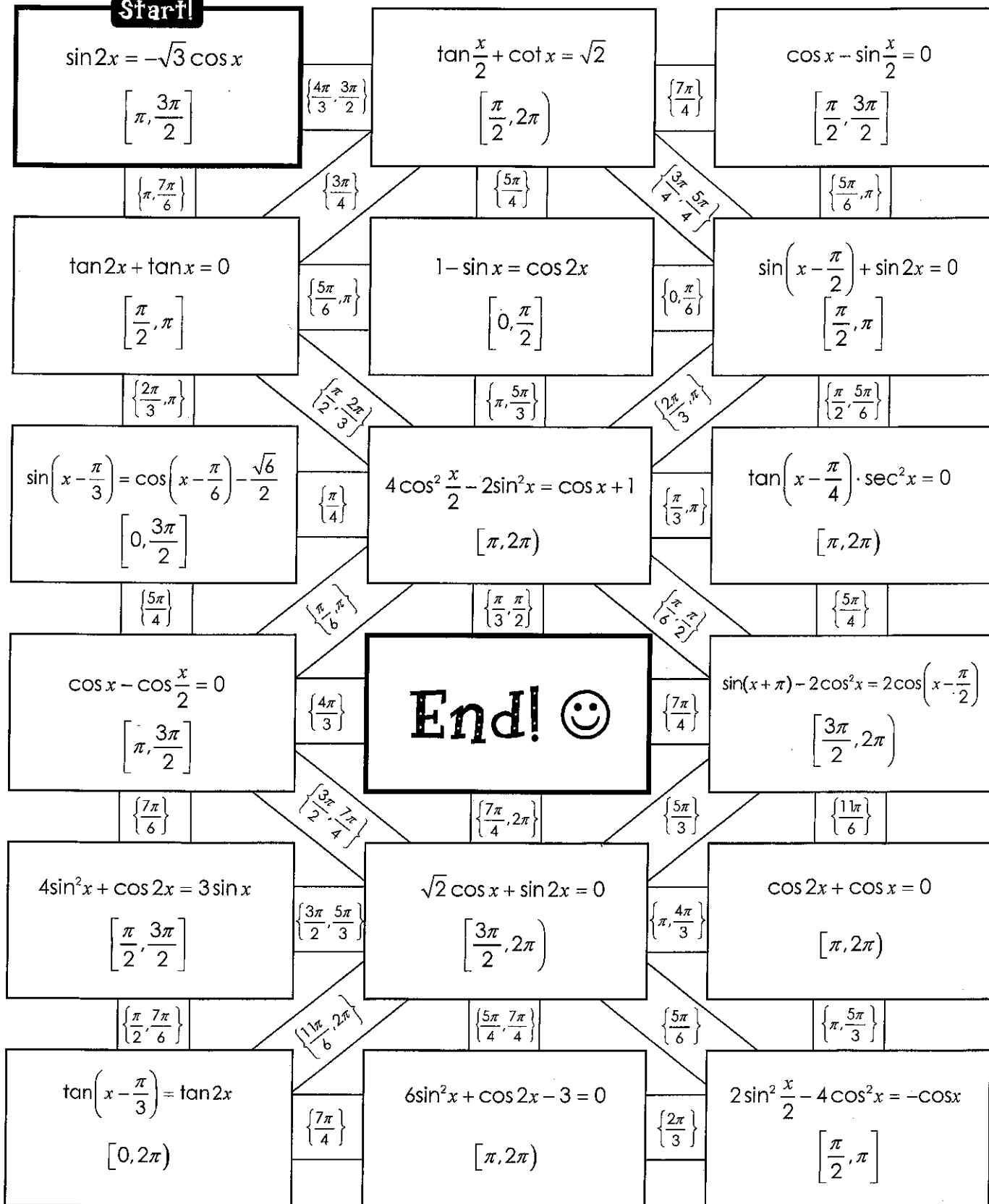


Trigonometric Equations Maze!

Directions: Solve each equation on the given interval. Use your solutions to navigate through the maze. **Staple all work to this paper!**

Start!



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Start!

$$\sin 2x = -\sqrt{3} \cos x$$

$$\left[\pi, \frac{3\pi}{2} \right]$$

$$\tan \frac{x}{2} + \cot x = \sqrt{2}$$

$$\left[\frac{\pi}{2}, 2\pi \right)$$

$$\cos x - \sin \frac{x}{2} = 0$$

$$\left[\frac{\pi}{2}, \frac{3\pi}{2} \right]$$

$$\tan 2x + \tan x = 0$$

$$\left[\frac{\pi}{2}, \pi \right]$$

$$1 - \sin x = \cos 2x$$

$$\left[0, \frac{\pi}{2} \right]$$

$$\sin \left(x - \frac{\pi}{2} \right) + \sin 2x = 0$$

$$\left[\frac{\pi}{2}, \pi \right]$$

$$\sin \left(x - \frac{\pi}{3} \right) = \cos \left(x - \frac{\pi}{6} \right) - \frac{\sqrt{6}}{2}$$

$$\left[0, \frac{3\pi}{2} \right]$$

$$4 \cos^2 \frac{x}{2} - 2 \sin^2 x = \cos x + 1$$

$$\left[\pi, 2\pi \right)$$

$$\tan \left(x - \frac{\pi}{4} \right) \cdot \sec^2 x = 0$$

$$\left[\pi, 2\pi \right)$$

$$\cos x - \cos \frac{x}{2} = 0$$

$$\left[\pi, \frac{3\pi}{2} \right]$$

End! 😊

$$\sin(x + \pi) - 2 \cos^2 x = 2 \cos \left(x - \frac{\pi}{2} \right)$$

$$\left[\frac{3\pi}{2}, 2\pi \right)$$

$$4 \sin^2 x + \cos 2x = 3 \sin x$$

$$\left[\frac{\pi}{2}, \frac{3\pi}{2} \right]$$

$$\sqrt{2} \cos x + \sin 2x = 0$$

$$\left[\frac{3\pi}{2}, 2\pi \right)$$

$$\cos 2x + \cos x = 0$$

$$\left[\pi, 2\pi \right)$$

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

$$\left[0, 2\pi \right)$$

$$6 \sin^2 x + \cos 2x - 3 = 0$$

$$\left[\pi, 2\pi \right)$$

$$2 \sin^2 \frac{x}{2} - 4 \cos^2 x = -\cos x$$

$$\left[\frac{\pi}{2}, \pi \right]$$