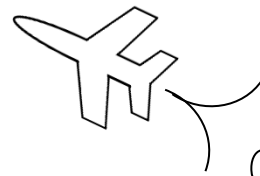


# MAth on the Fly!



NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

## Solving Trigonometric Equations

Find all angles in radians in the range of  $0 \leq x < 2\pi$  for each equation below.

1.  $\cos(x) = \frac{1}{2}$

2.  $\sin(x) = -\frac{\sqrt{3}}{2}$

3.  $\tan(x) = -1$

4.  $\cos(x) = 0$

5.  $\sin(x) = 1$

6.  $\tan(x) = \sqrt{3}$

Find all angles in degrees in the range of  $0^\circ \leq x < 360^\circ$  for each equation below.

7.  $\cos(x) = \frac{\sqrt{3}}{2}$

8.  $\sin(x) = \frac{1}{2}$

9.  $\tan(x) = 1$

10.  $\cos(x) = -1$

11.  $\sin(x) = 0$

12.  $\tan(x) = \frac{\sqrt{3}}{3}$

## SOLUTIONS

$$1. \quad x = \frac{\pi}{3}, \frac{5\pi}{3}$$

$$2. \quad x = \frac{4\pi}{3}, \frac{5\pi}{3}$$

$$3. \quad x = \frac{3\pi}{4}, \frac{7\pi}{4}$$

$$4. \quad x = \frac{\pi}{2}, \frac{3\pi}{2}$$

$$5. \quad x = \frac{\pi}{2}$$

$$6. \quad x = \frac{\pi}{3}, \frac{4\pi}{3}$$

$$7. \quad x = 30^\circ, 330^\circ$$

$$8. \quad x = 30^\circ, 150^\circ$$

$$9. \quad x = 45^\circ, 225^\circ$$

$$10. \quad x = 180^\circ$$

$$11. \quad x = 0^\circ, 180^\circ$$

$$12. \quad x = 30^\circ, 210^\circ$$