

Date: 20-4-2026

Grade 12 GEN

Lesson 9-2  
trigonometric  
functions of  
General angles.

## Objectives

Find values of  
trigonometric  
functions for  
acute angles.  
Reference Angle



وزارة التربية والتعليم  
Term-3

Module-8-

# Mathematics

2025-2026

## Trigonometric Functions



### Exp-1-

The point  $M(-2, 0)$  is on the terminal side of a standard angle.

Find the values of the given trigonometric functions.

$$\sin \theta =$$

$$\tan \theta =$$

$$\cos \theta =$$

$$\sec \theta =$$

$$\sin \theta = \frac{y}{r} \quad \cos \theta = \frac{x}{r} \quad \tan \theta = \frac{y}{x} \quad \sec \theta = \frac{r}{x}$$

### Exp-2-

### Trigonometric Values for Special Angles

| $\theta$      | $30^\circ$<br>or $\frac{\pi}{6}$ | $45^\circ$<br>or $\frac{\pi}{4}$ | $60^\circ$<br>or $\frac{\pi}{3}$ |
|---------------|----------------------------------|----------------------------------|----------------------------------|
| $\sin \theta$ |                                  |                                  |                                  |
| $\cos \theta$ |                                  |                                  |                                  |
| $\tan \theta$ |                                  |                                  |                                  |

$$\frac{\sqrt{2}}{2}$$

$$\frac{1}{2}$$

$$\frac{\sqrt{3}}{2}$$

$$1$$

$$\frac{\sqrt{3}}{3}$$

$$\sqrt{3}$$

$$\frac{1}{2}$$

$$\frac{\sqrt{2}}{2}$$

$$\frac{\sqrt{3}}{2}$$