# Derivatives of Trigonometric Functions

1. $\dfrac{d}{dx}\sin x = \cos x$

2. $\dfrac{d}{dx}\cos x = -\sin x$

3. $\dfrac{d}{dx}\tan x = \sec^2 x$

4. $\dfrac{d}{dx}\sec x = \sec x \tan x$

5. $\dfrac{d}{dx}\cot x = -\csc^2 x$

6. $\dfrac{d}{dx}\csc x = -\csc x \cot x$

# Useful Trigonometric Identities

1. $\sin^2\theta + \cos^2\theta = 1$

2. $1 + \tan^2\theta = \sec^2\theta$