

# 17 Lecture - MTH101

## Important Mcqs

**What is the derivative of the sine function?**

- a. cosine function
- b. tangent function
- c. cosecant function
- d. secant function

**Answer: a. cosine function**

**What is the derivative of the cosine function?**

- a. sine function
- b. tangent function
- c. cosecant function
- d. negative sine function

**Answer: d. negative sine function**

**What is the derivative of the tangent function?**

- a. cosine function
- b. cosecant function
- c. square of the secant function
- d. negative square of the cosecant function

**Answer: c. square of the secant function**

**What is the derivative of the cotangent function?**

- a. sine function
- b. cosine function

c. negative square of the cosecant function

d. negative square of the secant function

**Answer: c. negative square of the cosecant function**

**What is the derivative of the secant function?**

a. cosecant function

b. tangent function

c. product of the secant and tangent functions

d. negative product of the secant and tangent functions

**Answer: c. product of the secant and tangent functions**

**What is the derivative of the cosecant function?**

a. secant function

b. cotangent function

c. negative product of the cosecant and cotangent functions

d. product of the cosecant and cotangent functions

**Answer: c. negative product of the cosecant and cotangent functions**

**What is the derivative of  $\sin(x) + \cos(x)$ ?**

a.  $\cos(x) - \sin(x)$

b.  $\sin(x) + \cos(x)$

c.  $\sin(x) - \cos(x)$

d.  $\cos(x) + \sin(x)$

**Answer: a.  $\cos(x) - \sin(x)$**

**What is the derivative of  $\tan(x) * \sec(x)$ ?**

a.  $\sec^2(x)$

b.  $\sec(x) * \tan(x)$

c.  $\sec(x) + \tan(x)$

d.  $\tan^2(x)$

Answer: b.  $\sec(x) * \tan(x)$

**What is the derivative of  $\cos(2x)$ ?**

a.  $-2\sin(2x)$

b.  $-\sin(2x)$

c.  $2\sin(2x)$

d.  $-2\cos(2x)$

Answer: d.  $-2\sin(2x)$

**What is the derivative of  $\arcsin(x)$ ?**

a.  $1/\sqrt{1-x^2}$

b.  $-1/\sqrt{1-x^2}$

c.  $1/(1-x^2)$

d.  $-1/(1-x^2)$

Answer: a.  $1/\sqrt{1-x^2}$