

Activity/Experiment No.

Objective

HOLIDAY HOMEWORK XI MATHS

1. Make a Formula notes of Full syllabus.

2. Draw the graphs of various functions and write Dom(f) & Range(f).

3. Evaluate $\lim_{x \rightarrow 0} \left[\frac{\sin 2x + \sin 6x}{\sin 5x - \sin 3x} \right]$

4. Differentiate (i) $\left[\frac{e^x \cos x}{x^3} \right]$ (ii) $\frac{1 - \tan x}{1 + \tan x}$ with respect to x .

Q 5. If u, v, w are differentiable functions of x ,
Prove that $\frac{d}{dx}(uvw) = (uv) \frac{dw}{dx} + (wu) \frac{dv}{dx} + (wv) \frac{du}{dx}$

6. If α and β be two distinct real numbers such that $(\alpha - \beta) \neq 2n\pi$ for any integer n , satisfying the equation $a \cos \theta + b \sin \theta = c$. Then prove that
(i) $\cos(\alpha + \beta) = \frac{a^2 - b^2}{a^2 + b^2}$ (ii) $\sin(\alpha + \beta) = \frac{2ab}{a^2 + b^2}$

7. Solve (2) CBSE Sample Papers of Session 2023-24.

TEACHER'S SIGNATURE