



COLLEGE OF ENGINEERING & TECHNOLOGY

Department : Basic and Applied Sciences

Lecturer : Dr. Hossam Shawky

Course : Mathematics 1

Course No. : BA 123

Homework Sheet No.2

Find $\frac{dy}{dx}$ for the following functions:

(1) $y = (\sqrt{x^3 - 1})(1 - 3x)^6$

(2) $y = \tan^3(\sqrt{x^3 - 1})$

(3) $y = \frac{x \cos 3x}{1 - \tan^3 2x}$

(4) $y = (\sqrt{x^2 + 1}) \cos^3 \sqrt{x^3 + 2}$

(5) $y = x^2 \operatorname{cosec}^3 x - 4 \cot^2 x^3$

(6) $y = \operatorname{cosec}^3 \sqrt{\cos x}$

(7) $y = (1 - \sin \sqrt{x})^3 \cos \sqrt{x + 2}$

(8) $y = \sqrt{x} \tan^2(\sec^3 x)$

(9) $y = \sin(\sqrt{x} \tan \sqrt{x})$

GOOD LUCK
