Homework sheet : TRIGONOMETRIC DIFFERENTIATION

COMPLETION DATE :

1. Differentiate with respect to x ;

(a) tan 3x (ii) 3tan (4x – 2) [2]

2. Find the first and second derivatives of sin3x [4]

3. Differentiate with respect to x;

(a) x^2 cos 3x (b) sin x^3 (c) $\tan^3 x$

[6]

4. Differentiate with respect to x;

(a) $e^{\cos x}$ (b) cot x (c) cosec x

[6]

5. Differentiate with respect to x;

(a) ln (sinx) (b) $\sin 2x - e^{2\sin x}$

[4]

6. Find the minimum value of the expression x – 2cosx

[4]

7. Find the equation of the normal to the curve y = 3sin ½ x at the point where x = $\frac{\pi}{3}$

[4]

Total [32]