MAC 2311 Hybrid Calculus I (B)

**Sections 3.4-3.6**

1.Let , *f* (2) = 3 , *f* ′(2) = 3 , and *f* ′(3) = 9 . Then find *h*′(2).

 ANS: .

2. If, then find f′(*x*).

3. Find the derivative of.

 ANS:

4. Find the derivative of.

5. Find the speed and acceleration of the position function at t=1.

ANS: ; . , .

6. Given *yx*3 + sin (*xy*) = 1, find ANS:

7. Given sin (*y*) = *xy+x*2 –*y* 2, find ANS:

8. Find the equation of the tangent line to the graph of at the point (π/2,π).

ANS:

9. Find the derivative of. ANS: .

10. Find the derivative of *y* = *x* sin(*x*) by using logarithmic differentiation. ANS: )

11. Find the derivative of. ANS:

12. Find the derivative of. ANS:

13. Find the derivative of. ANS: