

~~MA~~ TADESE VICTOR ADEDAMOLA

ELECT/ELECT ENGINEERING

19/ENG04/055

MAT 102 ASSIGNMENT

$$\begin{aligned} \text{(i)} \quad A \cdot B &= (6u^2 + 8)(3u) + (4u - 10)(2u - 5) + (8u^3)(5) \\ &= 18u^3 + 24u + 8u^2 - 20u - 20u + 50 + 40u^3 \\ &= 58u^3 + 8u^2 - 16u + 50 \end{aligned}$$

$$\frac{dA \cdot B}{du} = 174u^2 + 16u - 16$$

$$\text{(ii)} \quad A = (6u^2 + 8)i + (4u - 10)j + 8u^3k$$

$$\frac{dA}{du} = 12ui + 4j + 24u^2k$$