

Good day Ma, Sorry but I would like to inform you that I had forgotten to put my serial number in my previous assignments. My Matric Number is 19/ENG041052 and my serial number is 032. Please do not disregard my assignments. Thank you

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MAT102 19/ENG041052 Eleet/Elect Engineering

$$\textcircled{1} \quad A = (6u^2 + 8)i + (4u - 10)j + 8u^3k$$
$$B = 3ui + (2u - 5)j + 5k$$

Find $\frac{d(A \cdot B)}{du}$

$$A \cdot B = 18u^3 + 24u + (8u^2 - 20u - 20u + 50) + 40u^3$$

$$A \cdot B = 18u^3 + 24u - 40u + 40u^3 + 8u^2 + 50$$

$$A \cdot B = 58u^3 - 16u + 8u^2 + 50$$

$$\frac{d(A \cdot B)}{du} = 174u^2 + 16u - 16$$

$$\textcircled{ii} \quad \frac{dA}{du} = 12u^2i + 4uj + 24u^2k$$

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