$\cancel{A = (6u^2+8)(3u) + (4u-10)(2u-5) + (8u^3)(5)}$

Solving

$(A \cdot B)$ first will give.

$= (6u^2+8)(3u) + (4u-10)(2u-5) + (8u^3)(5)$

and we know on dot product $i \cdot i = 1$

$j \cdot j = 1 \quad k \cdot k = 1$

multiplying $(A \cdot B)$.

$= 18u^3 + 24u + 8u^2 - \overset{(40u)}{20u - 20u} + 50 + 40u^3$

Therefore i) $\frac{d}{du}(A \cdot B = 54u^2 + 24 + 16u - 40 + 120u^2$.

$= \underline{174u^2 + 16u - 16}$

ii) $\frac{dA}{du} = A \Rightarrow (6u^2+8)i + (4u-10)j + 8u^3 k$

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

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