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maths 102

Answer

$$A = (6u^2 + 8)i + (4u - 10)j + 8u^3k$$

$$B = 3ui + (20 - 5)j + 9k$$

$$\begin{aligned} \frac{d}{du} (A \cdot B) &= (6u^2 + 8)i + (4u - 10)j + 8u^3k \\ &\quad - (3ui) + 2(20 - 5)j + 9k \\ &= (18u^3 + 24u)i + (8u^2 - 40u + 50)j + 40u^3k \end{aligned}$$

$$11) \frac{dA}{du} = (54u^2 + 24)i + (16u - 40)j + (120u^2)k$$