

Σημειωσες

$$1) \quad v = xi + yj + zk$$

$$v = ti + t^2j + t^3k$$

$$\frac{dv}{dt} = i + 2tj + 3t^2k$$

$$dt + = 1$$

$$= 1 + 2(1)j + 3(1)^2k$$

$$= i + 2j + 3k$$

$$2 \quad A = 4t^3j + 5k$$

$$B = 2t^2i + 4tj$$

$$\begin{matrix} 0 & 4t^3 & 5 \\ 2t^2 & 4t & 0 \end{matrix}$$

$$i(0 - (20t)) - j(0 - (10t^2)) + k(0 - (8t^5))$$

$$G = -20ti + 10t^2j - 8t^5k$$

$$\frac{dB}{dt} = \int_1^0 20t + 10t^2 - 8t^5$$

$$= \frac{20t^2}{2} + \frac{10t^3}{3} + \frac{8t^6}{6}$$

$$= 10t^2 + \frac{10t^3}{3} + \frac{8t^6}{6}$$

$$\int_1^0 10(0)^2 + \frac{10(0)^3}{3} + \frac{8(0)^6}{6} - (10(1)^2 + \frac{10(1)^3}{3} + \frac{8(1)^6}{6})$$

$$0 - \frac{10}{1} + \frac{10}{3} + \frac{8}{6}$$

$$= -\frac{60 + 20 + 8}{6} = -\frac{88}{6}$$