

$$B = -3/8$$

$$B = -5/8$$

$$K = -3/8$$

$$B = -5/8$$

L-2A

$$x = 7t^2$$

$$y = 2t(3t-2)$$

$$z = t-2$$

$$4 \quad (2B - 3C - 6I)(6I + 4C) = B$$

$$A = 7i + 2j - k \quad B = 2i + j + 4k, \quad C = 1 + j + k, \quad \text{find } (A+C)(B-A)$$

$$(A+C)(B-A)$$

$$(B-A)(A+C)$$

$$BC - AC + AB - A^2$$

$$(2B - 3C - 6I)(6I + 4C - B)$$

$$2 \quad \varphi = 1 + 2 - 4k$$

$$B = 2(C - 3) + k$$

solve problem

$$L = 1$$

$$\varphi = 1 - 8k$$

$$1 - 8k = \varphi$$

$$-8k = \varphi - 1$$

$$k = \frac{3}{8}$$

$$B = 2(C - 3) = -\frac{3}{8}$$

5 find a vector tangent to the space curve $x = t, y = t^2, z = t^3$ at the point where

$$t = 1$$

Solve for T, y, z

$$y = 0, z = 0, t = 0$$

$$\begin{cases} y = e^{i\frac{\pi}{3}} z^{(2/3)}, z \in \mathbb{C}, t = \sqrt{y} & y = z^{(2/3)}, \\ y = e^{i\frac{2\pi}{3}} z^{(2/3)}, z \in \mathbb{C}, t = \sqrt[3]{y} & y = z^{(2/3)}, \\ z \in \mathbb{C}, t = \sqrt{y} \end{cases}$$

Solve for T, y, z

$$y = e^{i\frac{\pi}{3}} z^{(2/3)}, z \in \mathbb{C}, t = \sqrt{y}; y = e^{i\frac{2\pi}{3}} z^{(2/3)}, z \in \mathbb{C}, t = \sqrt{y}; y = z^{(2/3)}, z \in \mathbb{C}, t = \sqrt{y}$$

Unconditionally

$$\arg(z) < \pi \text{ and } z \neq 0$$

$$y = e^{i\frac{\pi}{3}} z^{(2/3)}, z \in \mathbb{C}, t = -\sqrt{y}; y = e^{i\frac{2\pi}{3}} z^{(2/3)}, z \in \mathbb{C}, t = -\sqrt{y}; y = z^{(2/3)}, z \in \mathbb{C}, t = -\sqrt{y}$$

$$\arg(z) \geq \pi \text{ and } z \neq 0$$

$$y \geq 0, z = y^{(3/2)}, t = \sqrt[3]{2}$$

$$y \geq 0, z = -y^{(3/2)}, t = \sqrt[3]{2}$$