

QUIZ 03

1) Find a parametrization of a line that passes through the points $(0, 1, 0)$ & $(0, 0, 5)$

Soln:

$$\vec{r}(t) = (1-t)P_1 + tP_2$$

$$= (1-t)(0, 1, 0) + t(0, 0, 5) \quad \checkmark$$

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2) Find the cross product of $(1, 0, 1)$ & $(1, 2, 0)$.

Soln:

$$\begin{aligned} (\hat{i} + \hat{k}) \times (\hat{i} + 2\hat{j}) &= \hat{i} \times \hat{i} + \hat{k} \times \hat{i} \\ &\quad + 2\hat{i} \times \hat{j} + 2\hat{k} \times \hat{j} \\ &= \hat{j} + 2\hat{k} - 2\hat{i} \\ &= -2\hat{i} + \hat{j} + 2\hat{k} \end{aligned}$$

