

9/12/20

Quiz 3 Lecture 3 Khush Tated

1) $P(0, 1, 1)$, $Q(1, 0, 1)$ and $R(1, 1, 0)$.~~Q~~

$$PQ = (1, -1, 0)$$

$$PR = (1, 0, -1)$$

i	j	k
1	-1	0
1	0	-1

$$\langle 0, 1, 1 \rangle \cdot \langle 1, 1, -1 \rangle = 0 + 1 + (-1) = 0$$

$$x + y + z = 2$$

2) $r(t) = \langle 1, 1, 0 \rangle + t \langle 0, 2, 4 \rangle$

$$x + y + z = 14$$

$$\langle 1, 1+2t, 4t \rangle$$

$$1 + 2 + 4t = 14$$

$$2 + 2 + 4t = 14$$

$$4t = 10$$

$$t = 2.5$$

Point of Intersection is $(1, 5, 8)$