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4/23

Quiz 4

3/3

Find the pt where the lines give by

$$\vec{r}_1(t) = \langle -4, -5, 2 \rangle + t \langle 3, 1, -1 \rangle \text{ and}$$

$$\vec{r}_2(t) = \langle -67, 4, -17 \rangle + t \langle 6, -1, 2 \rangle$$

$$\vec{r}_1(t) = \langle -4 + 3t_1, -5 + t_1, 2 - t_1 \rangle$$

$$\vec{r}_2(t) = \langle -67 + 6t_2, 4 - t_2, -17 + 2t_2 \rangle$$

$$-4 + 3t_1 = -67 + 6t_2 \text{ AND } -5 + t_1 = 4 - t_2 \text{ AND } 2 - t_1 = -17 + 2t_2$$

$$t_1 = 9 - t_2$$

$$2 - (9 - t_2) = -17 + 2t_2$$

$$-7 + t_2 = -17 + 2t_2$$

$$t_2 = 10$$

$$t_1 = 9 - 10$$

$$t_1 = -1$$

$$\text{Intersection } \langle -4 + 3(-1), -5 + (-1), 2 - (-1) \rangle$$

$$\vec{r}_1(t) \langle -7, -6, 3 \rangle$$

$$\text{Intersection } \langle -67 + 6(10), 4 - 10, -17 + 2(10) \rangle$$

$$\vec{r}_2(t) \langle -7, -6, 3 \rangle$$

$$\text{pt is } \langle -7, -6, 3 \rangle$$