

(3)

Então $l(t) = t\underline{n} = t(2, -1, 3)$

$$= (2t, -t, 3t) = (x, y, z).$$

para P_1, P_2 temos (x, y, z) satisfaz

$$2x - y + 3z = 2, 6$$

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$$4t + t + 9t = 14t = 2, 6$$

$$t = \frac{1}{7}, \frac{3}{7} \quad \text{para } P_1, P_2$$

$$P_1 = \frac{1}{7} \underline{n}, \quad P_2 = \frac{3}{7} \underline{n}$$

$$\|P_1 - P_2\| = \text{distância} = \left\| \frac{3}{7} \underline{n} - \frac{1}{7} \underline{n} \right\|$$

$$= \left\| \frac{2}{7} \underline{n} \right\| = \frac{2}{7} \|\underline{n}\| = \frac{2}{7} \sqrt{4 + 1 + 9}$$

$$= \boxed{\frac{2}{7} \sqrt{14}}.$$