

$$133x + 10y + 12z = 123$$

~~$$133x + 10y + 12z = 123$$~~

$$(1) \quad P(10, 12, -13)$$

$$Q(-11, 13, 10)$$

$$R(9, -11, -10)$$

$$\vec{u} = \vec{PQ} = Q - P = (-11, 13, 10) - (10, 12, -13)$$

$$\vec{PQ} = (-11 - 10, 13 - 12, 10 - (-13))$$

$$\vec{PQ} = (-21, 1, 23)$$

$$\vec{v} = \vec{PR} = R - P = (9, -11, -10) - (10, 12, -13)$$

$$\vec{PR} = (9 - 10, -11 - 12, -10 - (-13))$$

$$\vec{PR} = (-1, -23, 3)$$

$$X = t(-21, 1, 23) + s(-1, -23, 3) + (10, 12, -13)$$

$$X = (x, y, z) \quad \vec{u} = (u_1, u_2, u_3)$$

$$\vec{v} = (v_1, v_2, v_3) \quad A = (a_1, a_2, a_3)$$

$$t, s \in \mathbb{R}$$

$$x = tu_1 + sv_1 + a_1$$

$$y = tu_2 + sv_2 + a_2$$

$$z = tu_3 + sv_3 + a_3$$