Solving a problem relating to camera rotation

Given the view plane, we have a unit vector representing the y axis and another representing the x axis, both parallel to the plane.
We have a point on the plane representing the middle of the screen, or (0, 0).
I want to find what combination of the two vectors offset from the middle point is equal to some arbitrary point on the view plane.
Essentially turning a 3D coordinate on a plane into a 2D coordinate.

Plane $Ax + By + Cz - D = 0$

with normal $N = (A, B, C)$

Arbitary point on plane $P = (x, y, z)$

Two vectors parallel to plane

$V_1 = (a_1, b_1, c_1)$

$V_2 = (a_2, b_2, c_2)$

Two scalars m & n

Starting point on plane $P_0 = (x_0, y_0, z_0)$

Given the following, find m & n

$P = P_0 + mV_1 + nV_2$ we know: P, P_0, V_1 & V_2

$$\begin{bmatrix} x \\ y \\ z \end{bmatrix} = \begin{bmatrix} x_0 \\ y_0 \\ z_0 \end{bmatrix} + m \begin{bmatrix} a_1 \\ b_1 \\ c_1 \end{bmatrix} + n \begin{bmatrix} a_2 \\ b_2 \\ c_2 \end{bmatrix}$$

Any component of V_1 or V_2 may be 0, but at least one is not

$$x = x_0 + m a_1 + n a_2$$
$$y = y_0 + m b_1 + n b_2$$
$$z = z_0 + m c_1 + n c_2$$

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$x = x_0 + m a_1 + n a_2$ ①
$y = y_0 + m b_1 + n b_2$ ②
$z = z_0 + m c_1 + n c_2$ ③

Solving for m

From ①

$x = x_0 + m a_1 + n a_2$
$m a_1 = x - x_0 + n a_2$
$m = (x - x_0 + n a_2)/a_1$ ④

Sub ④ into ②

$$y = y_0 + \frac{x - x_0 + n a_2}{a_1} b_1 + n b_2$$

Solve for n

$$n = \left[y - y_0 - \frac{x - x_0 + n a_2}{a_1} b_1\right] \div b_2$$

In this case a_1 & $b_2 \neq 0$

From here we can see six cases

If $a_1 \neq 0$

$$m = (x - x_0 + n a_2)/a_1$$

& If $b_2 \neq 0$

$$n = \left[y - y_0 - \frac{x - x_0 + n a_2}{a_1} b_1\right] \div b_2$$

& If $c_2 \neq 0$

$$n = \left[z - z_0 - \frac{x - x_0 + n a_2}{a_1} c_1\right] \div c_2$$

If $b_1 \neq 0$

$$m = (y - y_0 + n b_2)/b_1$$

& If $a_2 \neq 0$

$$n = \left[x - x_0 - \frac{y - y_0 + n b_2}{b_1} a_1\right] \div a_2$$

& If $c_2 \neq 0$

$$n = \left[z - z_0 - \frac{y - y_0 + n b_2}{b_1} c_1\right] \div c_2$$

If $c_1 \neq 0$

$$m = (z - z_0 + n c_2)/c_1$$

& If $a_2 \neq 0$

$$n = \left[x - x_0 - \frac{z - z_0 + n c_2}{c_1} a_1\right] \div a_2$$

& If $b_2 \neq 0$

$$n = \left[y - y_0 - \frac{z - z_0 + n c_2}{c_1} b_1\right] \div b_2$$