Método de las determinantes $\begin{Bmatrix} 2x + y = 6 \\ 4x + 3y = 14 \end{Bmatrix}$

PASO 1

Pasar el sistema de ecuaciones 2x2 a matriz aumentada; D, D_x y D_y

$$D = \begin{pmatrix} [\ \ ] & [\ \ ] \\ [\ \ ] & [\ \ ] \end{pmatrix}$$ 2 4 1 3

$$D_x = \begin{pmatrix} [\ \ ] & [\ \ ] \\ [\ \ ] & [\ \ ] \end{pmatrix}$$ 6 14 1 3

$$D_y = \begin{pmatrix} [\ \ ] & [\ \ ] \\ [\ \ ] & [\ \ ] \end{pmatrix}$$ 6 14 2 4

PASO 2

Hallar las determinantes para cada matriz; D, D_x y D_y

$A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$ es $\det(A) = |A| = \begin{vmatrix} a & b \\ c & d \end{vmatrix} = ad - bc$

$$|D| = \begin{vmatrix} [\ \ ] & [\ \ ] \\ [\ \ ] & [\ \ ] \end{vmatrix} = (\ \ )(\ \ ) - (\ \ )(\ \ ) = \square$$

$$|D_x| = \begin{vmatrix} [\ \ ] & [\ \ ] \\ [\ \ ] & [\ \ ] \end{vmatrix} = (\ \ )(\ \ ) - (\ \ )(\ \ ) = \square$$

$$|D_y| = \begin{vmatrix} [\ \ ] & [\ \ ] \\ [\ \ ] & [\ \ ] \end{vmatrix} = (\ \ )(\ \ ) - (\ \ )(\ \ ) = \square$$

PASO 3

Se remplaza el valor obtenido: D, D_x y D_y en la siguiente expresión:

$$x = \frac{D_x}{D} = \frac{(\ \ )}{(\ \ )} = \square \qquad y = \frac{D_y}{D} = \frac{(\ \ )}{(\ \ )} = \square$$

x y y son solución del sistema