

$\frac{22}{3}$

$$\begin{cases} 3x + 4(m+1)y = 3 \\ (m+1)x + 3y = 2 \end{cases}$$

$$X = \frac{\begin{vmatrix} 3 & 4(m+1) \\ 3 & 4(m+1) \end{vmatrix}}{\begin{vmatrix} 3 & 4(m+1) \\ m+1 & 3 \end{vmatrix}} = \frac{9 - 8m - 8}{9 - 4m^2 - 8m - 4} = \frac{8m - 1}{4m^2 + 8m - 5} = \frac{8m - 1}{(2m + 5)(2m - 1)}$$

$$Y = \frac{\begin{vmatrix} 3 & 3 \\ m+1 & 2 \end{vmatrix}}{\begin{vmatrix} 3 & 4(m+1) \\ m+1 & 3 \end{vmatrix}} = \frac{6 - 3m - 3}{9 - 4m^2 - 8m - 4} = \frac{3m - 3}{4m^2 + 8m - 5} = \frac{3m - 3}{(2m + 5)(2m - 1)}$$

∴ להבין שיש פתרון יחיד, נדרש שהמכנה לא יאפס.  $m = -2\frac{1}{2}$  !  $m = \frac{1}{2}$  (אם  $m = \frac{1}{2}$  לא יהיה פתרון)

פתרון יחיד ←  $\begin{cases} 3x + 6y = 3 \\ 1.5x + 3y = 2 \end{cases}$

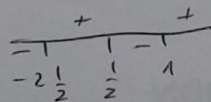
$m = \frac{1}{2}$

פתרון יחיד ←  $\begin{cases} 3x - 6y = 3 \\ -1.5x + 3y = 2 \end{cases}$

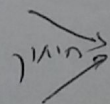
$m = -2\frac{1}{2}$

לפיכך יש פתרון יחיד עבור כל הממדים  $m$  שבהם המכנה אינו אפס.

$0 < Y = \frac{3m - 3}{(2m + 5)(2m - 1)}$

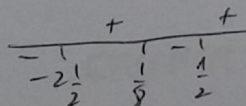


$m > 1$   
 $-2\frac{1}{2} < m < \frac{1}{2}$



$m > 1$   
 $-2\frac{1}{2} < m < \frac{1}{8}$

$0 < X = \frac{8m - 1}{(2m + 5)(2m - 1)}$



$m > \frac{1}{2}$   
 $-2\frac{1}{2} < m < \frac{1}{8}$

$m \leq -2\frac{1}{2}$  ,  $\frac{1}{8} \leq m \leq 1$

יש פתרון יחיד