

الف)  $\begin{cases} 3x - y = 9 \\ x + 2y = -6 \end{cases}$   $\begin{cases} 4x - 2y = 18 \\ x + 2y = -6 \end{cases}$   $\begin{cases} 3x = 12 \\ x = 4 \end{cases}$   $\begin{cases} 3y = -18 \\ y = -6 \end{cases}$

$$\frac{x}{y} = \frac{-r}{r}$$

ب)  $\frac{1}{x} - \frac{1}{y} = -1 \rightarrow \frac{y-x}{xy} = -1$

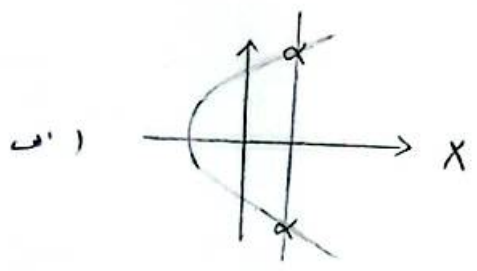
$\frac{a}{x} - \frac{v}{y} = \frac{ay - vx}{xy} = -r$   $\begin{cases} y-x = -xy \\ dy - vx = -rxy \end{cases}$   $\begin{cases} ry - rx = dy - vx \\ rx = ry \quad y = rx \end{cases}$   $\frac{x}{y} = \frac{x}{rx} \left[ \frac{1}{r} \right]$

$ra + rb = ra + r$   $a + 1 = -r$   $a = -r - 1$   
 $rb = a + r$   $a = -r$   
 $b = \frac{a+r}{1} = \frac{-r+r}{1} = 0$

$m^2 - 3m - 2 = 0$

$m^2 - 3m + r = 0$

$(m-1)(m-r) = 0$   $\begin{cases} \boxed{m=1} & f = \{(-1, -2), (r, a), (-1, -2), (r, 4), (r, 4), (r, a)\} \\ \boxed{m=r} & f = \{(-1, -2), (r, a), (-1, -2), (r, 4), (r, 4), (r, a)\} \end{cases}$



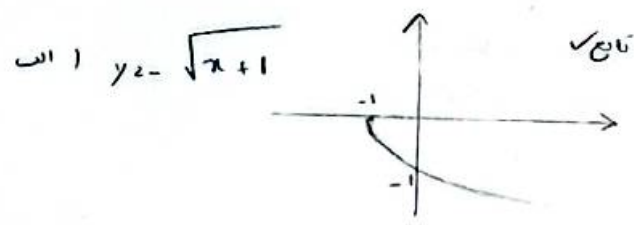
ب) ✓



د) ✓

مجموع مقادیر m

-f



ب)  $x = \frac{y}{\sqrt{1-y^2}}$

$$\frac{x_1}{\sqrt{1-x_1^2}} = \frac{x_2}{\sqrt{1-x_2^2}}$$

$x_1^2 - x_1^2 \sqrt{1-x_1^2} = x_2^2 - x_2^2 \sqrt{1-x_2^2}$   $x_1 = x_2$   $\sqrt{1-x_1^2} = \sqrt{1-x_2^2}$

$$\frac{x_1^2}{1-x_1^2} = \frac{x_2^2}{1-x_2^2}$$

دو پایه تابع هستند  $x_1 = x_2$

-d

