نام و نام خانوادگی ..... پاسخنامه تشریحی تکلیف شماره ۲۷ کلاس نهم پسر B .....

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$$\begin{cases} 3x - y = 9 \\ x + 2y = -6 \end{cases} \Rightarrow 7x = 14 \Rightarrow x = 2 \Rightarrow y = -3 \Rightarrow \frac{x}{y} = \frac{-2}{3}$$

$$\begin{cases} \frac{1}{x} - \frac{1}{y} = -1 \\ \frac{5}{x} - \frac{7}{y} = -3 \end{cases} \Rightarrow \begin{cases} xy = y - x \\ -5y + 7x = 3xy \end{cases} \Rightarrow y = 2x \Rightarrow \frac{x}{y} = \frac{1}{2}$$

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$$2a + 2b = 3a + 3 \rightarrow b = \frac{a+3}{2}$$

$$(1, a+1), (1, -2) \Rightarrow a + 1 = -2 \Rightarrow a = -3 \Rightarrow b = 0$$

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$$m^2 - 3m = -2 \rightarrow m^2 - 3m + 2 = 0 \Rightarrow m \begin{cases} 1 \Rightarrow 4m + 1 = 5 \checkmark \\ \Rightarrow 9 = 4 \times \\ 2 \Rightarrow 9 = 5 \times \end{cases}$$

به ازای هیچ مقدار

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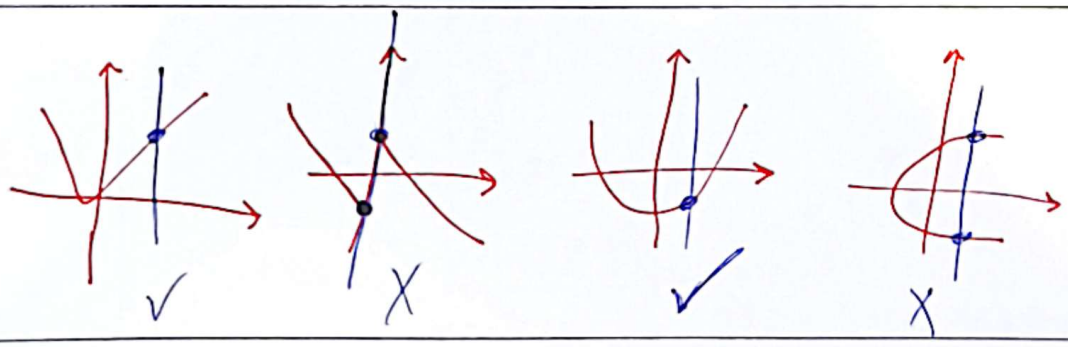

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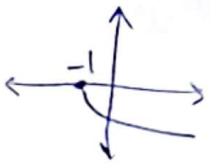
$$y = -\sqrt{x+1}$$



✓

$$x = \frac{y}{\sqrt{1-y^2}} \Rightarrow \frac{y_1}{\sqrt{1-y_1^2}} = \frac{y_2}{\sqrt{1-y_2^2}} \Rightarrow \frac{y_1^2}{1-y_1^2} = \frac{y_2^2}{1-y_2^2} \Rightarrow y_1^2 - y_1^2 y_2^2 = y_2^2 - y_1^2 y_2^2$$

$$\Rightarrow y_1^2 = y_2^2 \checkmark$$

چون y_1 و y_2 هم علامتند

$|y| = x \xrightarrow{x=2} y = \pm 2$ ✗

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$y^3 + 3y^2 + 3y + x^3 + x = 0$ ✓ بزرگترین توان y ، فرد است

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$f_{(x)} = \dfrac{(x+2)^2 + 1}{(x+2)^2 + 3} \xrightarrow{x=\sqrt{3}-2} y = \dfrac{\sqrt{3}^2 + 1}{\sqrt{3}^2 + 3} = \dfrac{4}{6} = \boxed{\dfrac{2}{3}}$

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$y = 3x - a \Rightarrow -4 = -3 - a \Rightarrow a = 1$

$y = x^3 + x + b \Rightarrow -4 = -1 - 1 + b \Rightarrow b = -2$

$\Rightarrow \begin{cases} y = 3x + 1 \\ f_{(x)} = x^3 + x - 2 \end{cases}$

$3x - 1 = x^3 + x - 2$

$x^3 - 2x - 1 = 0$ (جمع a و c ، b است)

$\begin{array}{l|l} x^3 - 2x - 1 & x + 1 \\ \underline{x^3 + x^2} & x^2 - x - 1 \\ -x^2 - 2x & \\ \underline{-x^2 - x} & \\ -x - 1 & \\ \underline{-x - 1} & \\ 0 & \end{array}$

$\Rightarrow (x+1)(x^2 - x - 1)$

-1 ؛ جمع ریشه‌های دیگر: $\dfrac{-b}{a} \rightarrow \boxed{1}$

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$\left.\begin{array}{l} a + b = 2a \Rightarrow a = b \\ a + b = a - 2b + 1 \end{array}\right\} \Rightarrow a = b = \boxed{\dfrac{1}{3}}$

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$f_{(x)} = \dfrac{4x^2 - ax + c + 1}{bx + 3} = x \Rightarrow 4x^2 - ax + (c+1) = bx^2 + 3x$

$c = -1$ ، $a = -3$ ، $b = 4$

$a + b + c = -3 + 4 - 1 = \boxed{0}$