

الف)  $(a, m+2y) = (3m-y, -2)$

$\frac{a}{y} = -\frac{m}{3}$

$\begin{cases} m-y=9 \\ 3y+m=-2 \end{cases} \Rightarrow \begin{matrix} m=14 \\ m=2 \end{matrix} \Rightarrow y=3$

ب)  $(-1, -3)$  و  $(\frac{1}{m} - \frac{1}{y}, \frac{a}{x} - \frac{y}{y})$

$\frac{a}{y} = \frac{-1}{-1} = 1$

$\begin{cases} \frac{a}{m} - \frac{y}{y} = -3 \\ \frac{1}{m} - \frac{1}{y} = -1 \end{cases} \Rightarrow \begin{matrix} -\frac{1}{m} = -2 \\ -\frac{1}{m} = -1 \end{matrix} \Rightarrow \begin{matrix} m = -\frac{1}{2} \\ m = -1 \end{matrix} \Rightarrow y = -1$

$f = \{(a, 2a), (a+1), (1, -2), (2, b)\}$

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

$b=0$

$f(a) + 2f(2) = 3f(1) \Rightarrow -4 + 2b = -4$

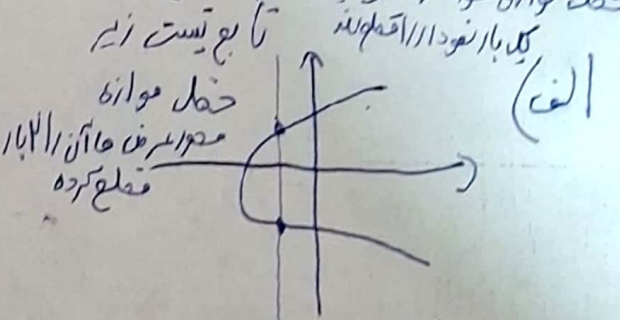
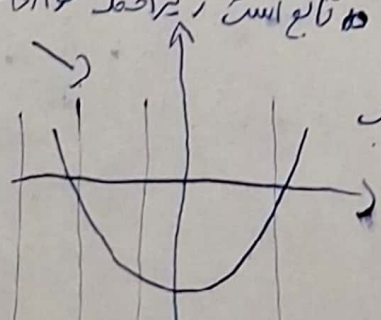
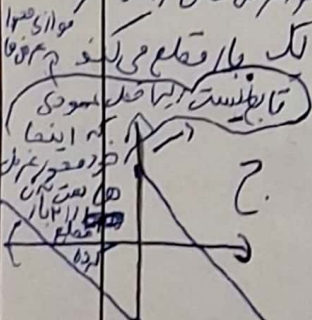
$f = \{(-1, m^2-3m), (m, 4), (-1, -2), (m+1, 4), (2, 4), (m+2, 4, m+1)\}$

$m^2-3m = -2 \Rightarrow m^2-3m+2=0$   
 $m=1$  or  $m=2$

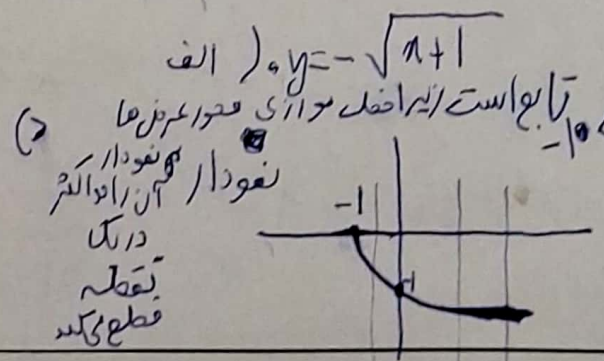
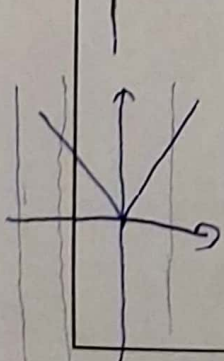
$(m-2)(m-1)=0$

$f(m=2) (m+1, 4) = (3, 4)$  and  $f(m=1) (m+1, 4) = (2, 4)$

چون  $m=1$  و  $m=2$  در این تابع نیست



در صورت تابع بودن



الف)  $y = -\sqrt{x+1}$   
 ب)  $n = \frac{y}{\sqrt{1-y^2}}$   
 $n=1 \Rightarrow y = \sqrt{1-y^2}$   
 $\Rightarrow y^2 = 1-y^2$   
 $\Rightarrow y = \pm \sqrt{\frac{1}{2}}$

تابع است زیرا حاصل ضرب دو تابع است

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الف)  $|y| = n \quad n = 2 \Rightarrow y = \pm 2$   
 مطابق تابع نیست

ب)  $y^3 + 3y^2 + 3y + n^3 + n = 0$  تعریف ریاضی جواب دادند تابع نیست

$f(n) = \frac{n^3 + 3n + 1}{n^3 + 3n + 7}$   $f(\sqrt{3}-2)$

$f_m = \frac{(n+2)^3 + 1}{(n+2)^3 + 3} = \frac{(\sqrt{3}-2+2)^3 + 1}{(\sqrt{3}-2+2)^3 + 3} = \frac{3}{5} = \frac{2}{4}$

$y = n^3 + an + b$  ,  $y - 3n + 1 = 0 \Rightarrow -3 = -1 + 1(-1) + b \Rightarrow b = -2$   
 $y = 3n - 2$   
 $n^3 + an + b = 3n - 2$   
 $\Rightarrow n^3 + (a-3)n + b + 2 = 0$   
 $-3 - a = -4 \Rightarrow a = 1$   
 $n^3 - 2n - 1 = 0$

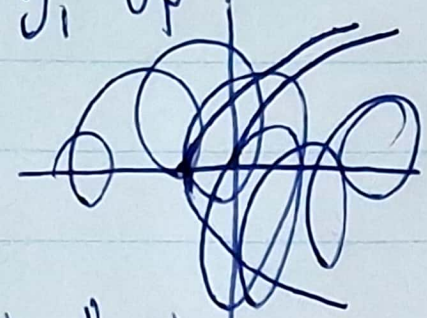
$f = \{ (2, a+b), (1, 2a), (-1, a-2b+1) \}$   
 $a+b = 2a \Rightarrow a = b$   
 $a - 2b + 1 = 2a \Rightarrow a = \frac{1}{2}$   
 $a - 2a + 1 = 2a \Rightarrow b = \frac{1}{2}$

$\frac{n^3 - an + c + 1}{bn + 3} = f(n) = y = a$   
 $\Rightarrow (bn + 3)a = n^3 - an + c + 1$   
 $= bn^3 + 3an$

$c+1=0 \Rightarrow c = -1$   
 $a+b+c = 1-2-1 = 0 \Rightarrow c = -1 \Rightarrow b = 2$

$$y_1 = \frac{-m - y_p \pm \sqrt{y_p^2 - 4y_p - m}}{p} y_1^N + (y_p) y_1 + m y_p + m = 0$$

$$y_1 = y_p$$



$$\Delta = y_p^2 - 4y_p - m$$

$$\Delta = y_p^2 - 4y_p - m$$

Δ می تواند + باشد و عبارت

$$\Delta > 0$$

$$y_1^m + m y_1^p + m y_1 + m^m + m = 0$$

$$y_1^m + m y_1^p + m y_1 + m^m + m = 0 \Rightarrow (y_1^m + m y_1^p + m y_1) = (y_1^m + m y_1^p + m y_1)$$

جواب سوال ۲

ب

$$y_1^m - y_1^m + m(y_1^p - y_1^p) + m(y_1 - y_1)$$

معادله

$$= (m + y_p) y_1^N + (y_p) y_1 + m y_p + m = 0$$

حل المسألة

$$\frac{n^{\mu} - \mu n - 1}{-n^{\mu} - n^{\mu}} \left[ \frac{n+1}{n^{\mu} - \mu - 1} \right]$$

$$-n^{\mu} - \mu n - 1$$

$$n^{\mu} - \mu n - 1 = 0 = (n+1)(n^{\mu} - \mu - 1) + n^{\mu} + \mu$$

$$-n - 1$$

$$\frac{+n+1}{\mu}$$

$$(n^{\mu} - \mu - 1) = 0$$

$$n^{\mu} - \mu$$

$$\frac{+1 \pm \sqrt{\omega}}{\mu}$$

$$\mu$$

$$\frac{1 + \sqrt{\omega} + 1 - \sqrt{\omega}}{\mu} = 1$$

$$\frac{1 + \sqrt{\omega}}{\mu}$$

$$\frac{1 - \sqrt{\omega}}{\mu}$$

جواب  
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