نام و نام خانوادگی .....یاسمن جوجه..... پاسخنامه تشریحی تکلیف شماره ۲.۷.... کلاس .....B.....

۱

$3x - y = 9 \Rightarrow 6x - 2y = 18$

$x + 2y = -4$

$\Rightarrow 7x = 14 \Rightarrow x = 2 \Rightarrow y = -3$

$\Rightarrow \frac{x}{y} = -\frac{2}{3}$

$\frac{1}{x} - \frac{1}{y} = -1 \Rightarrow \frac{y-x}{xy} = -1 \Rightarrow y - x = -xy \Rightarrow (x-y) = xy$

$\frac{5}{x} - \frac{7}{y} = \frac{5y - 7x}{xy} = -3$

$5y - 7x = -3xy$

$4x = 3y \Rightarrow y = \frac{4}{3}x$

$5y - 7x = -12x + 7x = 5x$

۲

$a + 1 = -2 \Rightarrow a = -3$

$f(a) + 2f(2) = 4f(1) \Rightarrow 2b = 0 \Rightarrow b = 0$

$-6 \quad 2b \quad -6$

۳

$m^2 - 3m = -2$

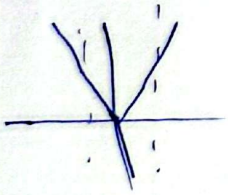
$m^2 - 3m + 2 = 0 \longrightarrow (m-1)(m-2) = 0 \Rightarrow m = 1 \text{ و } 2$

If $m = 1$ $(2,6)$ $(2,4)$ $\Rightarrow$ X تابع نیست

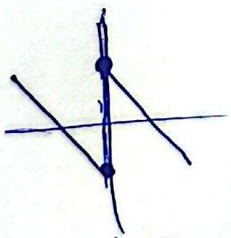
If $m = 2$ $(3,6)$ $(3,5)$ $\Rightarrow$ X تابع نیست

۰ تعداد

۴



تابع است



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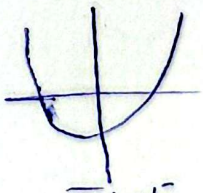

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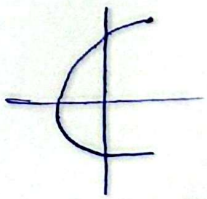
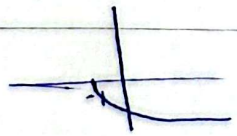


تابع نیست

الف) $y = -\sqrt{x+1}$



تابع است

ب) $x = \frac{y}{\sqrt{1-y^2}} \Rightarrow \text{If } x = 1 \Rightarrow y = \sqrt{1-y^2} \Rightarrow y^2 = 1 - y^2$

$2y^2 = 1 \Rightarrow y = \pm\frac{\sqrt{2}}{2}$

تابع نیست

$|x| = x \Rightarrow$ if $x=1 \Rightarrow y = 1-0 = 1 \Rightarrow$ تابع است

۶

$y^4 + 4y^2 + 4y = x^4 + 4x^2 + 4x$

$\Downarrow$

$(y^4 - x^4) + 4(y^2 - x^2) + 4(y - x) = 0$

$(y-x)(y+x)(y^2+x^2) + 4(y-x)(y+x) + 4(y-x) = 0$

$(y-x)(y^3 + x^3 + xy^2 + x^2y + 4y + 4x + 4) = 0$

تابع است

۷

$$f(x) = \frac{(x+2)^2 + 1}{(x+2)^2 + 4} \Rightarrow f(\sqrt{5}-2) = \frac{4}{6} = \frac{2}{3}$$

۸

$y = 2x - a \rightarrow (-1, -4) \Rightarrow -2 - a = -4 \Rightarrow a = 1$

$x^2 + x + b \rightarrow (-1, -4) \Rightarrow 1 - 1 + b = -4 \Rightarrow b = -4$

$x^3 + x - 4 = 2x - 1$

$\Downarrow$

$x^3 - 2x + 1 \mid x+1$

$-x^3 - x^2$

$-x^2 - 2x + 1$

$+x^2 + x$

$-x + 1$

$x^2 - x + 1$

$(x+1)(x^2 - x - 1) = 0$

$x = \frac{1 \pm \sqrt{5}}{2}$ (بقیه)

۹

$a + b = 2a \Rightarrow a = b$

$2a = a - 2b + 1$

$\Downarrow$

$2a = -a + 1 \Rightarrow 3a = 1 \Rightarrow a = \frac{1}{3}$

$b = \frac{1}{3}$

۱۰

$$\frac{4x^2 - ax + c + 1}{bx + 3} = x$$

$4x^2 - ax + c + 1 = bx^2 + 3x$

$\Downarrow$

$(4-b)x^2 + (-a-3)x + c + 1$

$b = 4$, $c = -1$, $x = -4$ $\Rightarrow a + b + c = -1$