تکلیف ۲۷ ایلما سالکار دهم دخترانه C

۱۹

(۱)

۳

الف) $۳x - y = ۹ \xrightarrow{\times ۲} ۴x - ۲y = ۱۸$

$x + ۲y = -۴ \qquad x + ۲y = -۴$

$x = ۲ \longleftarrow ۷x = ۱۴$

$y = -۳$

$\frac{x}{y} = -\frac{۲}{۳}$

ب) $\frac{1}{x} - \frac{1}{y} = -1 \xrightarrow{\times -۵} \begin{cases} -\frac{۵}{x} + \frac{۵}{y} = ۵ \\ \frac{۵}{x} - \frac{۷}{y} = -۳ \end{cases}$

$\frac{۵}{x} - \frac{۷}{y} = -۳$

$\frac{-۲}{y} = ۲ \qquad \frac{1}{y} = -1 \Rightarrow y = -1$

$x = \frac{-1}{۲}$

$\frac{x}{y} = \frac{-\frac{1}{۲}}{-1} = \frac{1}{۲}$

Subject.
Day. Month. Year.

(۲) ۲

$a+1=-2$

$a=-3$

-4

~~۲~~$a+2b=-4$

$b=0$

(۳) ۲

$m^2-3m=-2$ ق غ ق

$m^2-3m+2=0 \Rightarrow m=1$ یا 2

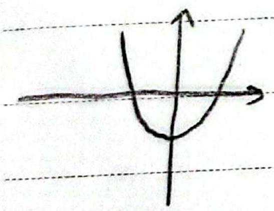
$(m+1,4)\neq(2,ع)$ $((m+1),4)\neq(3,۵)$

$(2,4)\neq(2,ع)$ $(3,4)\neq(3,۵)$

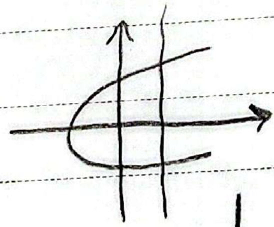
هیچ مقدار

(٤) ۲

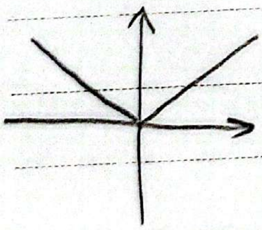
$y=x^2-a$



ب) ✓

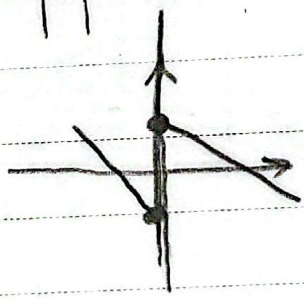


الف) ✗



د) ✓

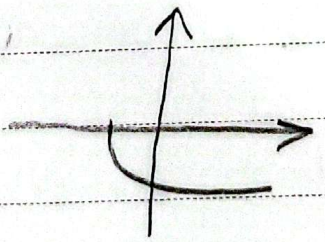
$y=|x|$



ج) ✗

(۵) ۱

الف) $y=-\sqrt{x+1}$



✓

ب) $x=\frac{y}{\sqrt{1-y^2}}$

~~$\frac{y_1}{1-y_1^2}=\frac{y_2}{1-y_2^2}$ $y_1=-y_2$~~

~~$y_1-y_2y_1^2=y_2-y_1y_2^2$~~

$y_1(y_1-y_2)=y_2(y_2-y_1)$

✗

Subject.

Day. Month. Year.

(۴)

$|y| = x$ if $x=1$ ✗

$y = \pm 1$

۵ ✓

ب) $y^3 + 3y^2 + 3y = -x^3 - x$

$y_1^3 + 3y_1^2 + 3y_1 + 1 = y_2^3 + 3y_2^2 + 3y_2 + 1$

$(y_1+1)^3 = (y_2+1)^3$

$y_1 + 1 = y_2 + 1$

$y_1 = y_2$

(۷)

۲

$\frac{(x+2)^2+1}{(x+2)^2+2} = f(x)$

$\frac{2^2+1}{2^2+2} = \frac{5}{6} = \frac{2}{3}$

(۸)

۲

$x^2 + ax + b = 3x - a$

$-1 - a + b = -2 - a$

$b = -2$

$a \Rightarrow -1 - a - 2 = -5$

$a = +1$

Subject. Day. Month. Year.

$x^3 + x - 2 - 3x + 1 = 0$

$x^3 - 2x - 1 = 0$

$x^3 + x^2 - x^2 - 2x - 1 = 0$

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

مجموع ضرایب: 1

(9)

$a + b = 2a$

$b = a$

$a - 2b + 1 = 2a$ (ص)

$1 = 2a$

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

(10)

$f(x) = x = \frac{4x^2 - ax + c + 1}{bx + 4}$ (ص)

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

$bx^2 + 4x \Rightarrow a = -4,\ b = 4,\ c = -1 \xrightarrow{+} a + b + c = 0$

$x = \frac{y_1}{\sqrt{1 - y_1^2}}$ $\quad \frac{y_1}{\sqrt{1 - y_1^2}} = \frac{y_2}{\sqrt{1 - y_2^2}}$ خیلی سوال خوب

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

$\frac{y_1^2}{1 - y_1^2} = \frac{y_2^2}{1 - y_2^2} \rightarrow y_1^2 - y_1^2 y_2^2 = y_2^2 - y_1^2 y_2^2$

$y_1^2 = y_2^2 \rightarrow |y_1| = |y_2|$

$y_1, y_2 > 0$ + مخرج ها ، هم علامت اند

$y_1 = y_2$