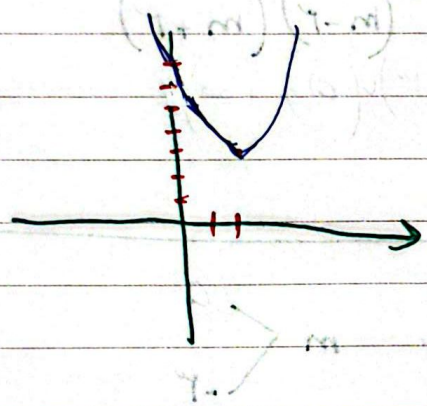
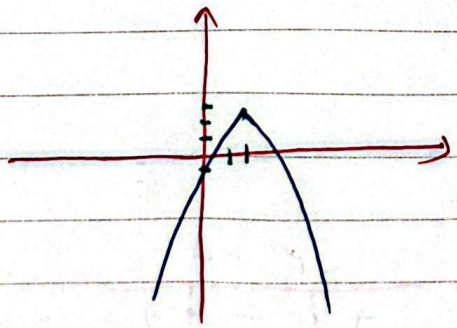
Subject ..... Date .....

عرفان حقیقی یازدهم پسر A

۱) $y = x^2 - 4x + 7 \Rightarrow \min$ | $\frac{-b}{2a} = \frac{4}{2} = 2$ | ۳



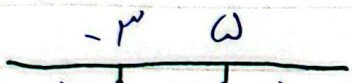
۲) $y = -x^2 + 4x - 1 \Rightarrow \max$ | $\frac{-b}{2a} = \frac{-4}{-2} = 2$ | ۳



۴

الف) $\Delta > 0 \Rightarrow (m+1)^2 - 4\left(\frac{1}{4}m+2\right)(2)$

$m^2+2m+1-4m-16 > 0 \Rightarrow \underbrace{m^2-2m-15}_{(m-5)(m+3)} > 0$



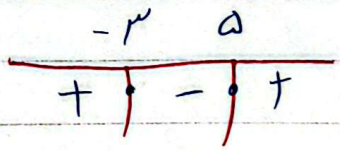
$\Rightarrow m \in (-\infty, -3) \cup (5, +\infty)$

ب) $\Delta = 0 \Rightarrow m^2-2m-15=0 \quad m \begin{cases} 5 \\ -3 \end{cases}$

$(m-5)(m+3)=0$

ج) $\Delta < 0 \Rightarrow m^2-2m-15 < 0$

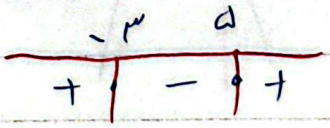
$(m-5)(m+3) < 0$



$m \in (-3, 5)$

د) $\Delta \geq 0 \Rightarrow m^2-2m-15 \geq 0$

$(m-5)(m+3) \geq 0$



$m \in (-\infty, -3] \cup [5, +\infty)$

Subject ..... Date .....

(۳ الف) $P>0 \Rightarrow \frac{c}{a}>0 \Rightarrow \frac{10}{m-2}>0 \Rightarrow m>2$ I

$\Delta>0 \Rightarrow (2m+2)^2 - 4(10)(m-2) \Rightarrow 4m^2+8m+4-40m+80$

$4m^2-32m+84>0 \Rightarrow m^2-8m+21>0 \Rightarrow \Delta<0$ همواره برقرار

$\delta<0 \quad \frac{-b}{a}<0 \Rightarrow \frac{2m+2}{m-2}<0$

	-1		2	
	+	0	-	∄

$-1<m<2$ II $\quad I \cap II = \varnothing$ بازای هیچ مقدار m

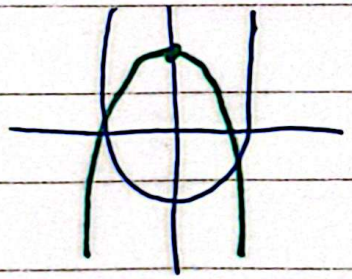
Subject ..... Date .....

ب) $\Delta > 0$ همواره برقرار $\quad p < 0 \Rightarrow \frac{1}{m-2} < 0 \Rightarrow m < 2$ I

$\frac{-b}{a} < 0 \Rightarrow \frac{2m+2}{m-2} < 0$ $\quad \begin{array}{c|ccc} & -1 & & 2 \\ \hline + & | & - & | & + \end{array}$ $\quad -1 < m < 2$ II

I $\cap$ II $\quad -1 < m < 2$

۴

الف)  $\Rightarrow P<0$

$\Delta>0 \Rightarrow$ همواره برقرار

$P<0 \Rightarrow \frac{c}{a}<0 \quad \frac{10}{m-2}<0 \Rightarrow \boxed{m<2}$

ب) $\frac{-b}{2a}=-2 \Rightarrow \frac{2m+2}{2m-4}=-2 \Rightarrow -4m+8=2m+2$

$-6m=-6 \quad \boxed{m=1}$

$$\frac{3x^2}{3} - (3\sin\alpha)x + \frac{3}{2} = 0 \xrightarrow{\times 6} 3x^2 - (12\sin\alpha) + 9$$ الف

چون sin بین ۱- و ۱ است

$$\Delta \geq 0 \Rightarrow 144\sin^2\alpha - 144 \geq 0 \Longrightarrow \sin\alpha = \begin{cases} -1 \\ 1 \end{cases}$$ قابل قبول

پس مساوی صفر است

$$-\frac{b}{a} > 0 \Rightarrow \sin\alpha = -1$$

ب)

$$\frac{(x+1)(3x-5)(x-1)(3x+1)}{-(1+x)(1-x)}$$

$$-(3x-5)(3x+1) \Rightarrow -9x^2 + 12x + 5 = y$$

$$\frac{-\Delta}{4a} = \frac{-144}{-36} = 12$$

Subject ..... Date .....

$r_S - V = \omega p$ (V

$r\left(\frac{m+r}{m}\right) - V = \omega\left(\frac{-r}{m}\right) \Rightarrow \frac{rm+\varepsilon}{m} - V = \frac{-1.}{m}$

$\frac{rm+\varepsilon}{m} + \frac{1.}{m} = V \Rightarrow \frac{rm+1\varepsilon}{m} = V$

$Vm = rm + 1\varepsilon \Rightarrow m = r$

$rn^r + \varepsilon n - r = . \Rightarrow s - rp \Rightarrow \frac{9}{.r} + 1 \Rightarrow \frac{1r}{r.}$

$s = \frac{-b}{a} = \frac{-\varepsilon}{.r} \Rightarrow \frac{-r}{r}$

$p = \frac{c}{a} = \frac{-r}{r} = \frac{-1}{r}$

$\frac{r\alpha + B}{\omega B^r} \overset{\times B}{\Rightarrow} \frac{r\alpha B + B^\varepsilon}{\omega B^r} \longrightarrow \frac{\Lambda + B^\varepsilon}{\omega B^r} \Rightarrow \frac{1}{\omega}\left(\frac{\Lambda}{B^r} + B^r\right)$ (r, Λ)

$\alpha B = r \Rightarrow \alpha = \frac{r}{B} \Rightarrow \alpha^r = \frac{\Lambda}{B^r}$

$\frac{1}{\omega}\left(\alpha^r + B^r\right) = \frac{1}{\omega}\left[(\alpha+B)^r - r\alpha B(\alpha+B)\right] = \frac{1}{\omega} \times 9\omega = 19$

(9

$ax^2 + bx + c = 2x + 10$

$ax^2 + (b-2)x - 6 = 0 \xrightarrow{x=2} 4a + (b-2)2 - 6 = 0$

$\Rightarrow 4a + 2b - 4 - 6 = 0 \Rightarrow 4a + 2b = 10$

$x=-3 \Rightarrow 9a - 3(b-2) - 6 = 0 \Rightarrow 9a - 3b + 6 - 6 = 0$

$\times 2 \begin{cases} 9a - 3b = 0 \\ 4a + 2b = 10 \end{cases} \times 3 \Rightarrow \begin{cases} 18a - 6b = 0 \\ 12a + 6b = 30 \end{cases} \Rightarrow a = \frac{1}{3}$

$b = 1$

$y = \frac{1}{3}x^2 + x + 2$

معادلة المحور $= x = \frac{-b}{2a} = -\frac{3}{2}$

(10

$2x^2 + (m+1)x + m + 6 = x$

$2x^2 + mx + m + 6 = 0 \Rightarrow \Delta = 0 \Rightarrow m^2 - 4(m+6)(2)$

$m^2 - 8m - 48 = 0 \Rightarrow (m-12)(m+4)$ $\quad m < \begin{matrix} 12 \\ -4 \end{matrix}$