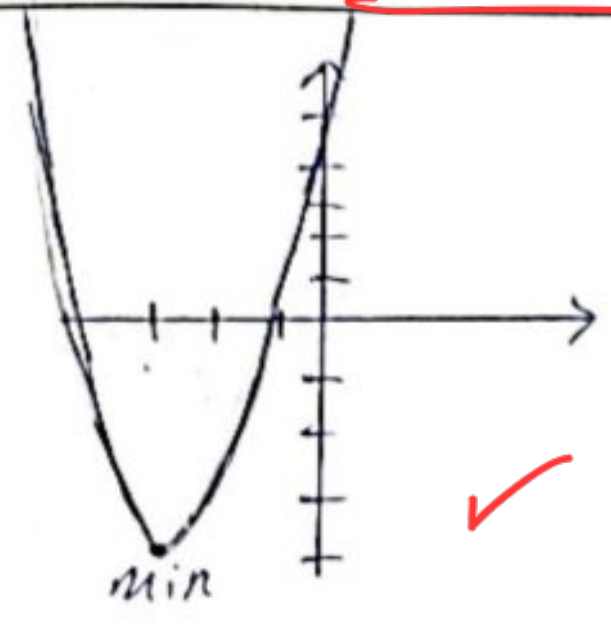
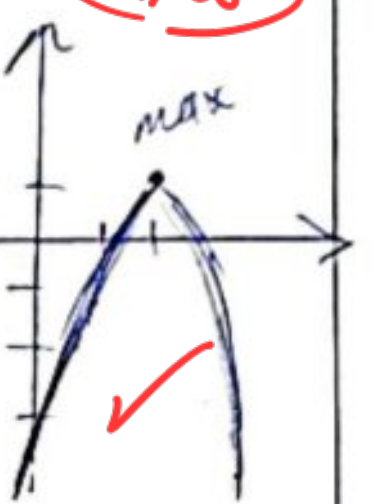


(ب) 	(۲) $y = m^2 + 4m + 5$ ext $-\frac{b}{2a} = -\frac{4}{2} = -2$ (الف) $\rightarrow$ min $y = 9 - 16 + 5 = -2$
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(ب) $0 = -m^2 + 4m - 5$ $\Rightarrow -(m^2 - 4m + 5) = 0$ $\Rightarrow -(m-3)(m-1) = 0$ $m = 3$ $m = 1$ (ج) $m^2 + 4m + 5 = 0 \Rightarrow (m+5)(m+1) = 0$ $\Rightarrow m = -5 \text{ و } -1$	(الف) $y = -m^2 + 4m - 3$ max $-\frac{b}{2a} = -\frac{4}{-2} = 2$ $y = -4 + 8 - 3 = 1$ 
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الف) $m^2 - 4m + a = 0$ $\Delta \geq 0$ $b^2 - 4ac = 16 - 4a \geq 0 \Rightarrow a \leq 4$ ب) $b^2 - 4ac = 16 - 4a = 0 \Rightarrow a = 4$ ج) $a - 4a < 0 \Rightarrow a > 4$ د) $a - 4a \geq 0 \Rightarrow a \leq 4$	۳
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(ب) $(m^2 - m - 1 = 0) + \frac{a}{2}$ $m^2 - m + \frac{1}{2} = \frac{a}{2}$ $(m - \frac{1}{2})^2 = \frac{a}{2}$ $m - \frac{1}{2} = \pm \sqrt{\frac{a}{2}} \Rightarrow m = \frac{1 \pm \sqrt{2a}}{2}$	(الف) $(m^2 - 2m - 1 = 0) + 2$ $m^2 - 2m + 1 = 2$ $(m-1)^2 = 2$ $m-1 = \pm \sqrt{2}$ $m = 1 \pm \sqrt{2}$
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الف) $\Delta = b^2 - 4ac = 4 - 4(-1) = 8$ $\Rightarrow m = \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{2 \pm \sqrt{8}}{2} = 1 \pm \sqrt{2}$ ب) $\Delta = b^2 - 4ac = 1 - 4(-4) = 17$ $\Rightarrow m = \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{-1 \pm \sqrt{17}}{2}$	۵
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الف) $m^2 - 11m + 28 = 0$ $\Rightarrow (m-4)(m-7) = 0 \quad \begin{cases} m=4 \\ m=7 \end{cases} \checkmark$ ب) $m^2 + 3m - 28 = 0$ $\Rightarrow (m+7)(m-4) = 0 \quad \begin{cases} m=-7 \\ m=4 \end{cases} \checkmark$	2
الف) $5m^2 - 12m + 7 = 0$ $\Rightarrow m^2 - 12m + 14 = 0$ $(m-7)(m-2) = 0 \quad \begin{cases} m=7 \\ m=2 \end{cases}$ $x < \frac{7}{8} \quad , \quad x < \frac{8}{8}$	ب) $3m^2 - 10m + 7 = 0$ $\Rightarrow m^2 - 10m + 21 = 0$ $(m-7)(m-3) = 0 \quad \begin{cases} m=7 \\ m=3 \end{cases}$ $x < \frac{7}{3}$ $x < \frac{3}{5}$ باید تقسیم بر ضریب x شود
الف) $2m^2 - 5m + 2 = 0$ $\Rightarrow m^2 - 5m + 4 = 0$ $(m-4)(m-1) = 0 \quad \begin{cases} m=4 \Rightarrow m=\frac{4}{2} \\ m=1 \Rightarrow m=\frac{1}{2} \end{cases}$	ج) $2m^2 - 5m + 1 = 0$ $\Delta = b^2 - 4ac = 25 - 4 = 21$ $m = \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{5 \pm \sqrt{21}}{4}$ 2
ب) $2m^2 + 5m + 2 = 0$ $\Rightarrow a+c=b \quad \begin{cases} m=-1 \\ m=\frac{c}{a} = -\frac{1}{2} \end{cases} \checkmark$	د) $5m^2 + 7m + 2 = 0$ $\Delta = b^2 - 4ac$ $\Rightarrow 49 - 4(5)(2) = -9 < 0$ دلتا منفی ندارد
$m^2 - 3m - 2 = 0 \quad \Delta = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} = \frac{3 \pm \sqrt{9+8}}{2} = \frac{3 \pm 4}{2}$ الف) $s^2 - 2s = 9 - 2(-2) = 13 \checkmark$ ب) $s^3 - 3s^2 = 27 - 3(+3)(-2) = 45 \checkmark$	2
الف) $\begin{pmatrix} 9 \\ 2 \end{pmatrix} + \begin{pmatrix} 9 \\ 2 \end{pmatrix} \Rightarrow \begin{pmatrix} 9 \\ 2 \end{pmatrix} = \frac{9 \times 4^2}{x} = 14 \quad \Rightarrow 14 + 21 = 35 \checkmark$ $\begin{pmatrix} 9 \\ 2 \end{pmatrix} = \frac{9 \times 4^2}{x} = 21$ ب) $\begin{pmatrix} 9 \\ 2 \end{pmatrix} - \begin{pmatrix} 9 \\ 2 \end{pmatrix} \Rightarrow \begin{pmatrix} 9 \\ 2 \end{pmatrix} = \frac{9 \times 4^2}{x \times x} = 14 \quad \Rightarrow 14 - 21 = -7 \checkmark$ $\begin{pmatrix} 9 \\ 2 \end{pmatrix} = \frac{9 \times 4^2}{x} = 21$	2