

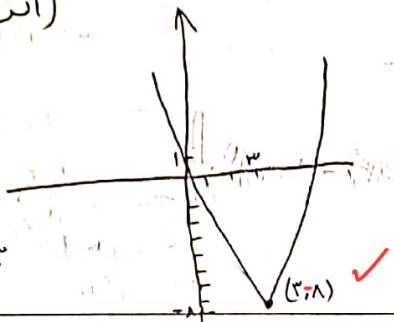
الف) $y = 2x^2 - 4x + 1$ → منبسط دار $exp \left| \frac{+4}{-4} = -1 \right. \checkmark$

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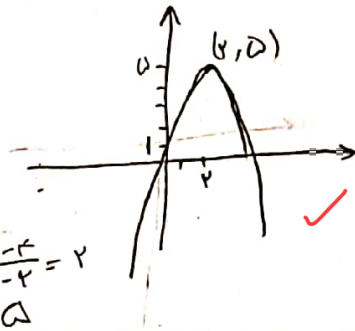
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ب) $y = -2x^2 + 3x - 5$ → ماکسیم دار $exp \left| \begin{array}{l} \frac{-3}{-2} = \frac{3}{2} \\ \frac{-(1-9)}{-2} = \frac{-8}{-2} = 4 \end{array} \right. \checkmark$

الف)



ب)



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$\alpha + \beta = 1$
 $\alpha \beta = -2$ } $2x^2 - 5x + 2 = 0 \Rightarrow x^2 - 2x - 2 = 0$
 $\Rightarrow 2x = 2 \quad x = -1 \Rightarrow -x + x + 9 = 2 = 0$
 $x = -3 \checkmark$

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$\sqrt{\alpha} - \sqrt{\beta} = 1 \Rightarrow \alpha + \beta - 2\sqrt{\alpha\beta} = 1 \Rightarrow 2m - 2\sqrt{m} = 1$ $\alpha + \beta = 2m$
 $\sqrt{m} = t$ $2t^2 - 2t = 1 \Rightarrow 2t^2 - 2t - 1 = 0$ $t = 1 \Rightarrow m = 1$ $\alpha \beta = m$
 $t = \frac{-1}{2}$

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$2x^2 - 2x - 1 = 0 \Rightarrow \frac{c}{a} = \frac{-1}{2} \checkmark$

$\frac{\sqrt{D}}{2a} \Rightarrow \frac{\sqrt{(m+1) - 4m}}{2} = \frac{\sqrt{(m-1)^2}}{2} = \frac{|m-1|}{2}$ $y = x^2 - 2x + 1 \Rightarrow \frac{2}{2}$
 $\frac{|m-1|}{2} = \frac{2}{2} \Rightarrow \begin{cases} m-1 = 2 \Rightarrow m = 3 \\ m-1 = -2 \Rightarrow m = -1 \end{cases}$ $y = x^2 + 2x + 1 \Rightarrow \frac{-2}{2} \checkmark$

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لو $\alpha = 1$ \rightarrow $Q \neq 0$

$\alpha = 1$ ✓ \rightarrow $\alpha = 1$

$\frac{-(9-5\alpha^2)}{\alpha} = \frac{v}{\lambda} \Rightarrow \lambda \alpha^2 - 1\lambda = v\alpha \Rightarrow \lambda \alpha^2 - v\alpha - 1\lambda = 0$
 $\left. \begin{matrix} \alpha = 1 \\ \alpha = -\frac{9}{\lambda} \end{matrix} \right\}$

6

$\frac{\sqrt{(a+1)^2 - 4a}}{1} = 1 \Rightarrow a^2 + 1 + 2a - 4a = 1 \Rightarrow a^2 - 2a + 1 = 1 \Rightarrow (a-1)^2 = 1 \Rightarrow$
 $\left. \begin{matrix} a = 2 \\ a = 0 \end{matrix} \right\}$

$\frac{\sqrt{(a+1)^2 - 4b}}{111} = 1 \Rightarrow 100 - 4b = 1 \Rightarrow b = 24.75$
 $\left. \begin{matrix} x^2 - 2x + 1 = 0 \rightarrow P = 1 \\ x^2 - 10x + 1 = 0 \rightarrow P = 10 \end{matrix} \right\} r = -c = 111$

$\frac{a}{1a} = \frac{1}{1} \rightarrow \left. \begin{matrix} Pb(\frac{1}{r})^r - b(\frac{1}{r}) - 1 = -1 \\ -a(\frac{1}{r})^r + a(\frac{1}{r}) + r = \frac{a+1}{r} \end{matrix} \right\} \frac{a+1}{r} = -1 \Rightarrow a = -12$ ✓

$\frac{b}{rb} = \frac{1}{r} \rightarrow \left. \begin{matrix} -a(\frac{1}{r})^r + a(\frac{1}{r}) + r = \frac{ra+rk}{14} \\ Pb(\frac{1}{r})^r - b(\frac{1}{r}) - 1 = \frac{-b-1}{r} \end{matrix} \right\} \frac{-14+14}{14} = \frac{12b-14}{14} \rightarrow b = 4$ ✓
 $-4 - (-12) = 8$ ✓

7

$y = r\alpha x^r + fx + \beta \Rightarrow y = x^r + \frac{r}{r\alpha} x + \frac{\beta}{r\alpha} = x^r - 5x + p$

$\alpha + \beta = \frac{-r}{r\alpha} \rightarrow \frac{1}{\alpha} + \beta = \frac{-r}{r\alpha} \Rightarrow \beta = -1$ ✓

$\alpha \beta = \frac{\beta}{r\alpha} \Rightarrow 1 = r\alpha^2 \Rightarrow \alpha = \pm \frac{1}{r}$
 ext $\left. \begin{matrix} \frac{-r}{\alpha} = \frac{r}{1-\alpha} \\ \frac{-1}{\alpha} = \frac{-14+100\alpha\beta}{1-\alpha} = \frac{-14}{1-\alpha} \end{matrix} \right\}$

8

$x^r - 5x + p = 0$
 $\Rightarrow a+b = a^r + b^r - 12$
 $ab = a+b-1$
 $r = a+b-1$
 $\Rightarrow a+b = 12$ ✓

$a^r + b^r - 12 = a+b \Rightarrow (a+b)^r - rab - 12 = a+b$
 $\Rightarrow (a+b)^r - (a+b) = rab + 12 \Rightarrow (a+b) \left(\frac{a+b-1}{ab} \right) = rab + 12$
 $(a+b)(ab) = rab + 12 \Rightarrow (a+b)(ab) - rab = 12$
 $\Rightarrow (ab)(a+b-r) = 12 \Rightarrow a^r b^r - ab = 12 \Rightarrow a^r b^r - ab = 12 = 0$
 $\Rightarrow (ab-1)(ab+r) = 0$
 $\left. \begin{matrix} ab = 1 \\ ab = -r \end{matrix} \right\}$

9