

$$\frac{-\Delta}{f_a} = v \Rightarrow \frac{f_{ac} - b^r}{f_a} = v \rightarrow f_{ac} - b^r = 18a$$

$$-12 = b^r = -18$$

$$\Rightarrow 19 = b^r$$

$$\Rightarrow b = \pm f$$

5

1

الف) $t^2 + 2t + 3 = 0 \rightarrow \Delta = 4 - 4(3)(1) \rightarrow \Delta < 0 \rightarrow$ تابع حقیقی ندارد

ب) $t^2 - 4t - 15 \rightarrow (t - 5)(t + 3)$

$t - 2^r = -3 \checkmark \quad t = -3$

$(5) X \Rightarrow f - 2^r = -3 \Rightarrow x^r = v \quad x = \pm \sqrt{v}$

5

2

$$f_{2^r} - 19x + m$$

$$\omega_{2^r} = a, a+r$$

$$S = f = 2a + r \rightarrow \boxed{a = 1} \Rightarrow \omega_{2^r} = 1, 3$$

$$p = \frac{c}{a} = \frac{m}{f} = 3 \Rightarrow \boxed{m = 12} \quad f_{2^r} - 19x + 12 = 0 \checkmark$$

1, 70

3

$$f_{2^r} - 9x + m - 1$$

$$2\alpha = f - \beta \Rightarrow \alpha = \frac{f - \beta}{2}$$

$$\alpha + \beta = \frac{f - \beta + 2\beta}{2} = \frac{f + \beta}{2} = 2$$

$$\Rightarrow \boxed{\beta = 0}$$

$$2\alpha - \beta = f$$

$$2\alpha = f \Rightarrow \boxed{\alpha = 1}$$

$$f_{2^r} - 9x = 0 \checkmark$$

1, 70

4

$$p = \frac{m-1}{2} = 0$$

$$\Rightarrow \boxed{m-1=0} \Rightarrow \boxed{m=1}$$

$$p = 1 \Rightarrow \frac{m^2 - 2}{-m} = 1$$

$$m^2 - 2 = -m$$

$$m^2 + m - 2 = 0$$

$$(m-1)(m+2)$$

$$\boxed{\begin{matrix} m=1 \rightarrow \checkmark \\ m=-2 \rightarrow X \\ D=0 \rightarrow X \end{matrix}}$$

کامل نویسی

1, 70

5

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

$$\alpha\beta = 1 \Rightarrow \boxed{\beta = \frac{1}{\alpha}}$$

$$P = \alpha\beta = 1$$

$$\frac{1}{\alpha} = 1 \Rightarrow \alpha = 1 \quad \boxed{\alpha = 1}$$

$$\alpha + \beta = \frac{m}{2} = \frac{1}{2} + \frac{1}{1} = \frac{3}{2}$$

$$2x^2 - \frac{3x}{2} + 1 = 0 \Rightarrow m = -\frac{3}{2}$$

1, 1/2

1

$$2x^2 - 5x + m$$

$$6x^2 - 29x + 12$$

$$S = \frac{5}{1} = 5x \Rightarrow \boxed{x=1}$$

$$\boxed{1, 3}$$

$$\frac{m}{1} = P = 3 \Rightarrow \boxed{m=3}$$

$$2x^2 - 5x + 3 = 0 \Rightarrow \Delta > 0 \checkmark$$

1, 3

1

$$\alpha^2 + \frac{1}{\alpha^2} = \left(\alpha + \frac{1}{\alpha}\right) \left(\alpha + \frac{1}{\alpha} - 2\right) \Rightarrow$$

$$\alpha + \beta = 5$$

$$\alpha\beta = 1$$

$$\Rightarrow \alpha = \frac{1}{\beta}$$

$$\boxed{\beta = \frac{1}{\alpha}}$$

$$(\alpha + \beta)(\alpha + \beta - 2)$$

$$(5)(5 - 2)$$

$$5 \times 3 = \boxed{15}$$

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1

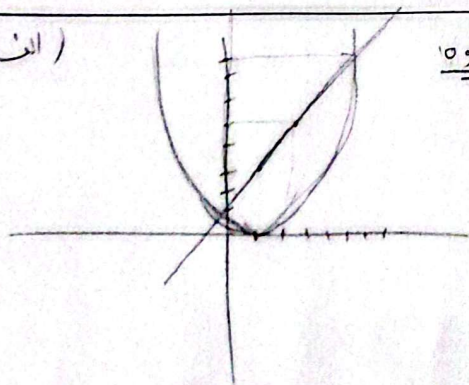
$$y = -\ln x^2 + 50x \rightarrow \max = \frac{-2500 -}{-40} = \boxed{62.5}$$

$$\text{تابع} = -\ln x^2 + 50x \rightarrow x = \begin{cases} 0 \\ 0 \end{cases} \checkmark$$

5

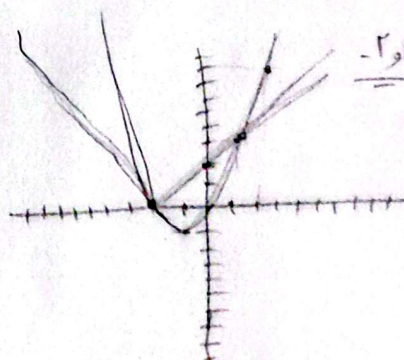
1

الف)



2, 2

ب)



2, 2

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