

$$-\frac{b}{2a} = x_5 \Rightarrow$$

$$\frac{-\Delta}{2a} = y_5 = v \Rightarrow \frac{-(b^2 + 12)}{-2} = v \Rightarrow \frac{b^2 + 12}{2} = v \Rightarrow b^2 + 12 = 21 \Rightarrow b^2 = 9 \begin{cases} b = 3 \\ b = -3 \end{cases}$$

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ریشه ندارد $x \Rightarrow t^2 + 2t + 3 = 0 \Rightarrow \Delta = 4 - 12 < 0$

۱, ۵۰

ب) $2 - x^2 = t \Rightarrow t^2 - 2t - 1 = 0 \Rightarrow (t-0)(t+2) = 0 \Rightarrow t = 0 \text{ یا } t = -2$

$f(x) = 0 \Rightarrow x^2 = -1$

$f(x) = -1 \Rightarrow x = \pm \sqrt{-1} \Rightarrow x^2 = -1 \Rightarrow \boxed{x = \pm i}$

$t = -2$ $\times$ $\checkmark$ $t = 0$ $\checkmark$

$\begin{cases} \beta = \alpha + 2 \\ \alpha = \alpha \end{cases} \Rightarrow \begin{cases} S = \frac{14}{2} = 7 = \alpha + \beta \\ P = \frac{m}{2} = 3 \end{cases} \Rightarrow \begin{cases} 2\alpha + 2 = 7 \\ \alpha = 1 \\ \beta = 3 \end{cases}$

$f(x) = 14x + 12 = 0 \Rightarrow x = -\frac{12}{14} = -\frac{6}{7}$

۱, ۷۵

$S = \alpha + \beta = \frac{4}{3} = 2 \Rightarrow \beta = 2 - \alpha \Rightarrow 2\alpha - (2 - \alpha) = 4 \Rightarrow 3\alpha = 6 \Rightarrow \alpha = 2, \beta = 0$

$P = 3(m-1) = 0 \Rightarrow m = 1$

$2x^2 - 4x = 0 \Rightarrow x = 0 \text{ یا } x = 2$

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$\frac{c}{a} = \frac{1}{1} \Rightarrow \frac{m^2 - 2}{-m} = 1 \Rightarrow m^2 + m - 2 = 0 \Rightarrow (m+2)(m-1) = 0 \Rightarrow m = -2 \text{ یا } m = 1$

دورترین مقدار می خواهیم
 $\begin{cases} m = -2 \rightarrow \Delta = 0 \\ m = 1 \rightarrow \Delta = 12 \checkmark \end{cases}$
 $\Delta > 0$
جواب: $m = 1$

$$P = \alpha\beta = 3 \Rightarrow \beta = \frac{3}{\alpha} \Rightarrow \alpha \times \frac{9}{\alpha^2} = 2 \Rightarrow \alpha = \frac{9}{2}, \beta = \frac{2}{3}$$

$$S = \frac{12}{2} = 3 = m \Rightarrow \boxed{m=3} \quad \frac{9}{2} + \frac{2}{3} = \frac{28}{6}$$

$$2x^2 - \frac{4x}{12} + 3 - 0 \checkmark$$

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$$\alpha = 3\beta \Rightarrow S = 2 = 3 + 3\beta \Rightarrow \boxed{\beta=1} \quad \boxed{\alpha=3}$$

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

$$2x^2 - 3x + 3 - 0 \checkmark$$

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$$P = 12 = \alpha\beta \Rightarrow \alpha = \frac{12}{\beta} \Rightarrow \alpha^2 + \frac{1}{\alpha^2} = \frac{1}{\beta^2} + \frac{1}{\alpha^2} = \frac{1(\alpha^2 + \beta^2)}{(\alpha\beta)^2} \Rightarrow$$

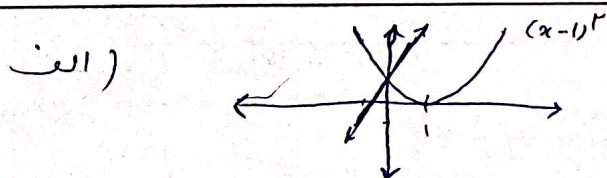
$$\frac{1(5^2 - 3 \times 12)}{12^2} \Rightarrow \frac{1(25 - 36)}{144} \Rightarrow \frac{-11}{144} \Rightarrow \boxed{101} \text{ جواب } 5$$

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$$1) y_s = \text{ارتفاع کمانه عم} \Rightarrow \frac{-\Delta}{2a} = \frac{-(2000 - 2(0))}{-2} = \boxed{92, 5m} \quad 5$$

$$2) \frac{d}{dt} \text{ دین ریشه} = \text{جوابان} \Rightarrow -\log t + \log t = 0 \Rightarrow \log t = 0 \Rightarrow t = 1 \Rightarrow \boxed{t=1} \text{ جواب}$$

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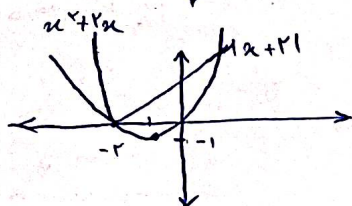
معادله دو جواب دارد
چون دو تابع در برخورد
در $x=0$ و $x=2$ دارند

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

$$x(x-2) = 0$$

$$x=0 \rightarrow x=2$$

ب)



دو جواب دارد
به ازای $x=-2$
 $x=1$

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