

$$\frac{b^2 + 12}{4} = 7 \rightarrow b^2 + 12 = 28 \rightarrow b^2 = 16 \rightarrow \boxed{b = \pm 4}$$

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معادله جواب حقیقی ندارد. $\Delta < 0 \rightarrow \frac{4 - 12}{-8} < 0 \rightarrow$ الف)

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ب) $(4 - x^2) = t \rightarrow \frac{t^2 - 2t - 15}{(t-5)(t+3)} = 0 \rightarrow$
 $t = -3 \rightarrow -x^2 + 7 = 0 \rightarrow \boxed{x = \pm \sqrt{7}}$
 $t = 5 \rightarrow -x^2 - 1 = 0 \rightarrow x^2 = -1$ غلط

$\alpha, \alpha + 2 \rightarrow 2\alpha + 2 = 4 \rightarrow \boxed{\alpha = 1}$ و $\boxed{\alpha + 2 = 3} \rightarrow 1 \times 3 = 3 \rightarrow \frac{m}{4} = 3 \rightarrow \boxed{m = 12}$

$4x^2 - 14x + 12 = 0$
 $\Delta > 0$ ✓

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$2\alpha - 3 = \beta$ و $\alpha + \beta = 2 \rightarrow 3\alpha = 4 \rightarrow \boxed{\alpha = \frac{4}{3}}$ $\rightarrow \boxed{\beta = 0} \rightarrow \alpha\beta = 0$

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

$4x^2 - 4x = 0$ ✓

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$\alpha\beta = 1 \rightarrow \frac{m^2 - 2}{-m} = 1 \rightarrow m^2 + m - 2 = 0 \rightarrow$
 $m = -2 \rightarrow$ ریشه‌ی مضائقه
 $m = 1 \rightarrow$ ریشه‌ی متمایزی همد.

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$$\frac{\alpha\beta \times \beta}{3} = F \rightarrow \beta = \frac{F}{3} \rightarrow \alpha = \frac{9}{F} \rightarrow \alpha + \beta = \frac{14 + 27}{12} = \frac{F3}{12}$$

$$m = \frac{F3}{12}$$

$$2^r - \frac{F3}{12} + F = 0 \checkmark$$

1,70

$$3\alpha, \alpha \rightarrow 3\alpha^r = m, F\alpha = F \rightarrow \alpha = 1 \rightarrow 3\alpha^r = 3 \rightarrow m = 3$$

$$2^r - F\alpha + 3 = 0 \checkmark$$

1,70

$$\alpha^r + \frac{1}{\alpha^3} = \left(\alpha + \frac{r}{\alpha}\right) \left(\alpha^r + \frac{F}{\alpha^r} - r\right)$$

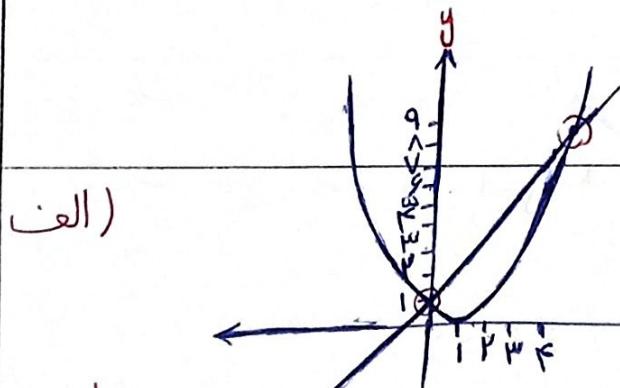
$$\alpha^r + F\alpha + F = F9\alpha^r \rightarrow \alpha + F = F9\alpha^r \rightarrow \alpha + \frac{F}{\alpha^r} = F9$$

$$\alpha^r + \frac{1}{\alpha^3} = 301$$

$$h(t) = -10t^r + 50t \rightarrow \text{ارتفاع ماكسيم} \rightarrow \frac{-\Delta}{Fa} \rightarrow \frac{(50)^r}{F_0} = \frac{125}{2}$$

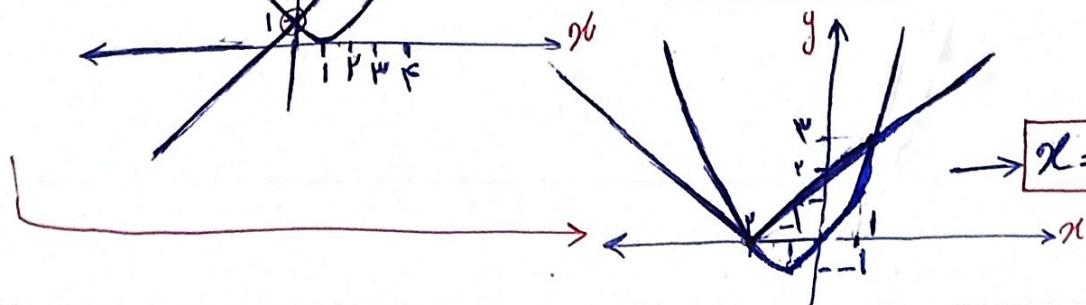
$$-10t(t-5) = 0 \rightarrow t = 5$$

$$42/5$$



$$x = 0, F$$

ب)



$$x = -2, 1$$

1,70