

$$\frac{-b}{2a} = \frac{-b}{-2} = \frac{b}{2} = 7 \Rightarrow \boxed{b=14}$$

Max برای مقدار راست نه !!

$$y_{\max} = -\frac{\Delta}{4a} = -\frac{(b^2+12)}{-4} = 7 \Rightarrow \boxed{b=4}$$

0

1

۱) $x^2 = t \Rightarrow t^2 + 2t + 3 = 0 \Rightarrow \Delta < 0$ ناممکن، ریشه حقیقی ✓

۲) $f-x^2 = t \quad t^2 - 2t - 15 = 0 \quad (t-5)(t+3) = 0$

$f-x^2 = 5 \Rightarrow x^2 = -1$ ✗

$f-x^2 = -3 \Rightarrow x^2 = 7 \Rightarrow \boxed{x = \pm\sqrt{7}} \checkmark$

(2)

2

$$|x - \beta| = \frac{\sqrt{\Delta}}{2a} = 7 \Rightarrow \frac{\sqrt{459 - 14m}}{2} = 7 \Rightarrow \sqrt{459 - 14m} = 14 \Rightarrow 459 - 14m = 196 \Rightarrow 14m = 263 \Rightarrow \boxed{m=19} \checkmark$$

$$4x^2 - 14x + 19 = 0 \Rightarrow x^2 - 4x + 3 = 0$$

$$(x-3)(x-1) = 0 \Rightarrow \boxed{x=1, 3}$$

(3)

3

$$S = 7$$

$$2\alpha - \beta = 7 = 2\alpha + 2\beta \Rightarrow \beta = 0$$

$$f(0) = 0 \Rightarrow m - 1 = 0 \Rightarrow \boxed{m=1} \checkmark$$

(2)

4

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

$$m^2 + m - 2 = 0 \Rightarrow (m+2)(m-1) = 0$$

$$m = 1 \text{ و } -2$$

$m \neq -2 \quad 2x^2 + 4x + 2 = 0 \Rightarrow (x+1)^2 = 0 \Rightarrow$ ریشه مضاعف **دو**

$m \neq 1 \Rightarrow -x^2 + 4x - 1 = 0 \quad \Delta = 16 - 4 = 12 > 0$

دو ریشه متمایز

$$\Rightarrow \boxed{m=1} \checkmark$$

(2)

5

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

$$P = y \quad S = m$$

$$x^2 = mx - y$$

$$x^2 = m\alpha - y = 13(m - \beta) = y\alpha = f \Rightarrow \alpha = \frac{y}{f}$$

$$\frac{9}{14} - \frac{y}{f} + y = \frac{9 - 14m + f}{14} = \frac{9 - 14m}{14} = 0$$

$$m = \frac{9 - 14m}{14} = \frac{19}{f}$$

$$\alpha\beta \times \beta = f \xrightarrow{\alpha\beta = 3} \beta = \frac{f}{3} \quad \alpha = \frac{9}{f}$$

$$S = \frac{4f}{12} = m \checkmark \quad \text{جک میخوردن باشد!}$$

$$\alpha = 3\beta$$

$$S = f \Rightarrow \alpha + \beta = 4\beta = f \Rightarrow \beta = 1, \alpha = 3$$

$$P = m \Rightarrow \alpha\beta = y = m$$

$$m = 3 \checkmark$$

$$S = V$$

$$P = y \Rightarrow P^w = 1$$

$$\frac{1}{\alpha^w} = \frac{P^w}{\alpha^w} = \beta^w$$

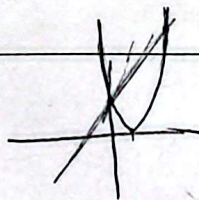
$$\Rightarrow \alpha^w + \frac{1}{\alpha^w} = \alpha^w + \beta^w = S^w - w_s P =$$

$$w \in w - w \times v \times y = \boxed{301} \checkmark$$

$$-10t^2 + 500t = 0 \Rightarrow t(-10t + 500) = 0 \xrightarrow{t \neq 0} \boxed{t = 50} \checkmark$$

$$y_{\max} = \frac{-\Delta}{f_a} = \frac{-(25000)}{-50} = \boxed{500} \checkmark$$

الف)



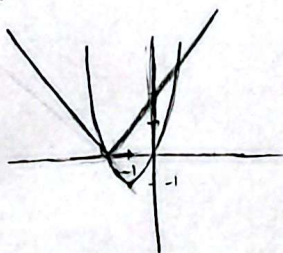
✓

$\boxed{40}$

دو جواب

ب)

$$\begin{aligned} x^2 + 2x \\ \sqrt{\frac{x^2}{4}} = -1 \\ (-1)^2 - 2 = -1 \end{aligned}$$



✓

$\boxed{-2, 1}$

دو جواب