

19, 25

تسبیح شاد 13

عرفان حاجی علی زاده

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

$$2a - 2 = -1$$

$$\frac{-1}{2a-2} = 2$$

$$2a = 3$$

$$a = \frac{3}{2}$$

$$\frac{3}{2} - 1 = \frac{1}{2}$$

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

$$-x^2 + 2x + 6 = 0$$

$$x^2 - 2x - 6 = 0$$

$$(x-4)(x+2) = 0$$

$$\boxed{x=4} \quad \checkmark$$

$$x=-2$$

(2)

$$D > 0 \quad a < 0$$

$$b^2 - 4ac > 0$$

$$m < 0$$



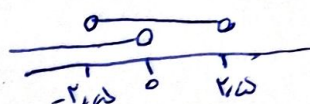
~~2~~

$$2a - 4m^2 > 0$$

$$2a > 4m^2$$

$$\frac{2a}{4} > m^2$$

$$\frac{-a}{2} < m < \frac{a}{2}$$



$$m = (-2, 0) \quad \checkmark$$

(2)

$$x^2 - 5x + 6 =$$

$$\frac{3 - \sqrt{a}}{2} + \frac{3 + \sqrt{a}}{2} = 2$$

$$\frac{3 - \sqrt{a}}{2} \times \frac{3 + \sqrt{a}}{2} = \frac{6}{4}$$

سوال نفعه با ضرایب صحیح!

$$x^2 - 2x + \frac{6}{4} \quad \checkmark$$

$$\rightarrow 4x^2 - 4x + 6 = 0$$

(45)

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

$$\alpha^2 - \beta^2 = s^2 - 2p = 19 - m - 2 = 17 - m$$

$$s = 4$$

$$p = \frac{m+2}{2}$$

$$\frac{(\alpha+\beta)(\alpha-\beta)}{4} = -\frac{4}{4} \sqrt{17-2m}$$

$$\boxed{m=4} \quad \checkmark$$

$$2\alpha - 2m - 4 \sqrt{17-2m} = 17$$

(2)

$$\begin{bmatrix} 2 \\ 9 \end{bmatrix} \quad \begin{bmatrix} 0 \\ a \end{bmatrix}$$

$$ax^2 + bx + c$$

$$ax^2 + b(x+a)$$

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

$$-2a = b$$

$$ax^2 - 2a(x+a)$$

$$2a - 2a + a = 9$$

$$-2a = 2$$

$$a = -1$$

$$x^2 - 2x - a = 0$$

$$(x-a)(x+1) = 0$$

$$x=a \quad x=-1$$

$$\boxed{(-1, a)} \quad \checkmark$$

$$-x^2 + 2x + a$$

(2)

a

$$\frac{\alpha + \beta}{\alpha \beta} = \frac{\frac{V}{\alpha}}{\frac{q\beta}{\alpha}} = \frac{V}{q\beta}$$

$$\alpha^2 - V\alpha + q\beta = 0$$

$$\alpha \beta^2 - V\beta + q\beta = 0$$

$$\alpha \beta^2 + \beta = 0$$

$$\beta(\alpha\beta + 1) = 0$$

$$\alpha\beta + 1 = 0$$

$$\alpha\beta = -1$$

$$\frac{q\beta}{\alpha} = -1$$

$$-1\alpha = q\beta$$

$$\alpha^2 - q\alpha = 0$$

$$\alpha(\alpha - q) = 0$$

$$\alpha = 0 \quad \times$$

$$\alpha = q \quad \times$$

$$\alpha = -q \quad \checkmark$$

$$q\beta = -1\alpha - q$$

$$q\beta = -q$$

$$\frac{V}{q\beta} = \frac{V}{-q} \quad \checkmark$$

$$\alpha^2 + m\alpha - 1m = 0$$

$$\beta^2 + m\beta - 1m = 0$$

$$\alpha^2 - m\beta = 1$$

$$\beta^2 - 1m = -m\beta$$

$$\alpha^2 + \beta^2 - 1m = 1$$

$$s^2 - 1p$$

$$m^2 + 1m - 1m - 1 = 0$$

$$m^2 + 1m - 1 = 0$$

$$(m+1)(m-1) = 0$$

$$m = -1 \quad \times$$

$$m = 1 \quad \checkmark$$

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

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

$$s = 1 \quad \times$$

$$s = -1 \quad \checkmark$$

$$\frac{f\alpha - b^2}{f\alpha} = 1$$

$$\frac{1m^2 + 1\Lambda m - 1s}{1m} = 1$$

$$1m^2 + 1\Lambda m - 1s = 1m$$

$$1m^2 - 1m - 1s = 0$$

$$m^2 - 1m - 1 = 0$$

$$(m-1)(m+1) = 0$$

$$m = 1 \quad \times$$

$$m = -1 \quad \checkmark$$

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

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

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

$$(x-1)(x+1) = 0$$

$$x = 1 = k \quad \checkmark$$

$$x = -1$$

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

$$\frac{-b}{f\alpha} = 1$$

$$b = -f\alpha$$

$$d\alpha^2 + b\alpha + c$$

$$d\alpha^2 + b\alpha + f$$

$$x = 1 \quad f\alpha - \Lambda\alpha + f = s$$

$$-f\alpha = 1$$

$$a = -\frac{1}{f}$$

$$= \frac{1}{f} x^2 + 1x + f$$

$$\frac{\alpha + \beta}{\alpha\beta} = \frac{f}{-1} = -\frac{f}{1} \quad \checkmark$$

$$f - \Lambda a - \Lambda + 1a^2 + f\alpha + 1 = 0$$

$$1a^2 - 1a - 1 = 0$$

$$a = 1 \quad a = -\frac{1}{f}$$

$$x^2 - \Lambda x + 1 = 0$$

$$(x-1)(x-1) = 0$$

$$\boxed{x = 1}$$

$$\boxed{x = 1} \quad \checkmark$$

$$x^2 - \frac{\Lambda}{f} x + \frac{f}{f} = 0$$

$$x^2 - \Lambda x + f = 0$$

$$x^2 - \Lambda x + 1 = 0$$

$$\frac{f}{f} \quad \frac{f}{f}$$

$$\boxed{x = 1}$$

$$\boxed{x = \frac{f}{f}} \quad \checkmark$$