

14, 25

حل المسألة

خواص نوشته شود

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$$y = -2x + b \quad \text{max } x = 5 \quad x = 0$$

$$y = \frac{-\Delta}{\Delta a} = \frac{b^2 + 1}{4} = 5 \rightarrow b^2 = 18 - 1 = 17 \rightarrow b = \pm \sqrt{17}$$

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$$\text{الف) } f(x) = \frac{2x^2}{x^2 + 1} + \frac{2x}{1+x} - (x+1) = 0$$

ریشه حقیقی ندارد $\Delta < 0$

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1

$$\text{ب) } f(x) = (x-2)^2 - 2(x-2) - 10 \rightarrow x^2 - 2x - 10 = 0$$

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

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

$$x+4 = 0 \rightarrow x = -4$$

$$x-2 = -2 \rightarrow -x = -4 \rightarrow x = 4$$

$$x = \pm \sqrt{17}$$

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$$x^2 - 14x + m = 0 \quad \alpha = 2, \beta = 3 \quad m = ? \quad \alpha \neq \beta$$

$$\alpha + \beta = 2 + 3 = 5 \rightarrow \beta = 1$$

$$p = 2 \times 1 = 2 \rightarrow m = 17$$

$$x^2 - 14x + 17 = 0 \quad \Delta > 0 \checkmark$$

1, 10

$$x^2 - 4x + m - 1 = 0 \quad 2\alpha - \beta = 5 \rightarrow \beta = 2\alpha - 5$$

$$\alpha + \beta = 2\alpha - 5 = 2 \rightarrow \alpha = 7$$

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1, 10

$$m = 1 \quad x^2 - 4x = 0 \quad \Delta > 0 \checkmark$$

1, 10

$$-m^2 + 5m + m^2 - 2 = 0 \quad \alpha = \frac{1}{\beta}$$

$$\alpha, \beta = \frac{1}{\beta} \times \beta = 1 = \frac{m^2 - 2}{-m} = 1 \rightarrow m^2 - m - 2 = 0 \quad (m+2)(m-1) = 0$$

$$\beta + \frac{1}{\beta} = \frac{\beta^2 + 1}{\beta} = \frac{5}{2m} \rightarrow \beta^2 - 5\beta + 1 = 0 \quad m = 1 \rightarrow \beta^2 - 5\beta = 0$$

$$\beta^2 - 5\beta + 1 = 0 \quad m = -1 \rightarrow \beta^2 - 5\beta + 1 = 0$$

$\rightarrow m = 1 \quad \Delta > 0 \checkmark$
 $\rightarrow m = -1 \quad \Delta = 0 \times$

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$$S = -\frac{2c}{1r} \quad m = m \alpha \neq \alpha = 0 \quad m = ? \quad \alpha \beta^2 = 5$$

$$(\alpha \beta^2) \beta = 5 \rightarrow \beta^3 = 5$$

$$\alpha \frac{1}{\alpha} = 5 \rightarrow \alpha = 5$$

1, 10

$$m = \frac{5c}{1r} \quad 2x^2 - \frac{4x}{1r} + 1 = 0 \quad \Delta > 0 \checkmark$$

$$m^r - \varepsilon x + m = 0$$

$$m = \varepsilon \beta$$

$$m = \varepsilon$$

جواب

$$S = \alpha, \beta = \varepsilon \beta + 1 = \varepsilon \beta = \varepsilon \rightarrow \beta = 1$$

$$q = \varepsilon$$

$$P = 1 - \varepsilon = \varepsilon$$

$$x^r - \varepsilon x + \varepsilon = 0 \checkmark$$

1, 2, 3

$$m^r - v x + r = 0$$

$$q^r + \frac{\Lambda}{q^r} = ?$$

$$q^r + \frac{\Lambda}{q^r} = \left(\alpha + \frac{r}{\alpha}\right)^r - r \left(\alpha + \frac{r}{\alpha}\right)^{r-1} = (v)^r - \overline{v} r (v)^{r-1} = r \varepsilon^r - \varepsilon^r = \varepsilon^r$$

$$\alpha^r + \beta^r = (\alpha + \beta)^r - r (\alpha + \beta)^{r-1} \alpha \beta = S^r - r S P$$

$$\alpha + \frac{r}{\alpha} = \frac{\alpha^2 + r}{\alpha} = \frac{v \alpha}{\alpha} = v$$

$$h(t) = -10t^2 + 40t \quad \text{max} \quad y = \frac{-\Delta}{2a} = -\frac{40 \cdot 40}{-20} = 80 \rightarrow h = 80$$

$$x = \frac{-b}{2a} = \frac{-40}{-20} = 2 \rightarrow -1 \cdot t(t-4) = -t^2 + 4t \quad \left. \begin{array}{l} t=0 \\ t=4 \end{array} \right\} \checkmark$$

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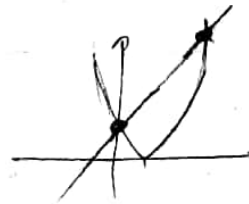
$$i) (x-1)^r = rx + 1$$

$$x = 0, 1$$

$$ii) m^r + rx \leq 1 \quad m = r$$

$$m(r+r)$$

$$x = -1, 1$$



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