

نام و نام خانوادگی: امیرحسین... پاسخنامه تشریحی تکلیف شماره ۲۲ کلاس دهم: سر... شبها

$$x^2 - 5x + 2 = 0 \rightarrow \alpha, \beta \rightarrow \text{ریشه ها} \quad \frac{\alpha + \beta^2}{\alpha \beta^2} = ?$$

$$P = \alpha\beta = \frac{c}{a} = 2 \rightarrow \beta = \frac{2}{\alpha}$$

$$S = \alpha + \beta = -\frac{b}{a} = 5 \Rightarrow \frac{\alpha + \beta^2}{\alpha \beta^2} = \frac{\alpha}{\alpha(\frac{2}{\alpha})^2} + \frac{\beta^2}{\alpha} = \frac{1}{\alpha}(\alpha^3 + \beta^3)$$

$$\frac{1}{\alpha}(S^3 - 3PS) = \frac{1}{\alpha}(5^3 - 3(2)(5)) = \frac{1}{\alpha} \cdot 9\alpha = 9 \rightarrow \text{جواب: } \underline{9}$$

$$(3, -8) \rightarrow 9a + 3b + c = -8$$

$$(-1, 5, -8) \rightarrow a(\frac{9}{8}) + b(\frac{-3}{8}) + c = -8$$

$$9a - \frac{3}{8}a + (3b + \frac{3}{8}b) + (c - c) = 0 \rightarrow 3a + 2b = 0$$

$$S = -\frac{b}{a} = -\frac{-\frac{3}{2}a}{a} = \frac{3}{2} = 1,5 \rightarrow \text{جواب: } \underline{1,5}$$

$$x^2 + 2kx + a = 0 \quad \alpha - \beta = \frac{\epsilon}{\mu} k \rightarrow \frac{\sqrt{\Delta}}{|a|} = \frac{\epsilon k}{\mu}$$

$$\sqrt{\Delta} = \epsilon k^2 - 2_0 \rightarrow \frac{\sqrt{\Delta}}{|a|} = \frac{\sqrt{\epsilon k^2 - 2_0}}{1} = \frac{\epsilon k}{\mu} \rightarrow \epsilon k = \mu \sqrt{\epsilon k^2 - 2_0} \rightarrow 14k^2 = 9(\epsilon k^2 - 2_0)$$

$$\rightarrow 14k^2 = 9\epsilon k^2 - 180 \rightarrow 180 = 2_0 k^2 \rightarrow k^2 = 9 \rightarrow \left[\frac{k^2}{\mu}\right] = \left[\frac{9}{2}\right] = \underline{4,5} \rightarrow \text{جواب: } \underline{4,5}$$

$$A = (x_0, y) \quad B = (-5, y) \quad \text{ریشه ها} \rightarrow \alpha, \beta$$

$$\frac{\alpha + \beta}{\mu} = \left(\frac{-5 + x_0}{\mu}\right) = -1 \rightarrow \alpha + \beta = -\mu \rightarrow S = -\frac{\mu}{\mu} = -1$$

$$\alpha^2 + \beta^2 = a \rightarrow (\alpha + \beta)^2 - 2\alpha\beta = a \rightarrow \alpha\beta = \frac{-1}{\mu}$$

$$y = a(x^2 + 2x - \frac{1}{\mu}) = 1 \rightarrow a(1 + 2 - \frac{1}{\mu}) \rightarrow a = \frac{\mu}{\mu} \rightarrow y = \frac{\mu}{\mu}(x^2 + 2x + (\frac{-1}{\mu}))$$

$$\rightarrow x = 0 \rightarrow y = \underline{\frac{1}{\mu}} \rightarrow \text{جواب: } \underline{\frac{1}{\mu}}$$

$$F(\frac{9}{\mu}) < 0 \Rightarrow -(\frac{9}{\mu})^2 + a\frac{9}{\mu} + m < 0 \Rightarrow -\frac{81}{\epsilon} + \frac{9a}{\mu} + m < 0 \rightarrow m < -\frac{9}{\epsilon} = \underline{-2, 25}$$

$$\text{دارای دو ریشه} \rightarrow \Delta > 0 \rightarrow 4a + \epsilon m > 0 \rightarrow m > -\frac{4a}{\epsilon} = \underline{-4, 25}$$

$$-4, 25 < m < -2, 25 \Rightarrow m = -3, -5, -7, -9 \rightarrow \text{جواب: } \underline{4}$$

$$y = mx^r - 12x + am - 1 \xrightarrow{\text{مشتق}} (m^r - 12 + a)m = 0$$

$$y = 2 \rightarrow \frac{-\Delta}{\epsilon a} = 2 \rightarrow -\Delta = 12a \rightarrow \Delta = -12a \rightarrow \Delta = -12m$$

$$12\epsilon - 10m^r + \epsilon m = -12m \rightarrow 12\epsilon - 10m^r + 12m = 0 \xrightarrow{\text{مربط}} -10m^r + 12m + 12\epsilon = 0 \xrightarrow{\div \epsilon} -10m^r + 12m + 12 = 0 \rightarrow m^r + 12m - 120 = 0 \rightarrow (m+12)(m-10) = 0 \rightarrow m = 10 \text{ (جواب)}$$

$$12x^r - 12x + 12 = 0 \rightarrow x = \frac{+12}{4} = 3 \text{ (جواب)}$$

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$$a^r = \alpha\beta \rightarrow a^r = \frac{1}{a} = 2a - 1 \rightarrow a^r - 2a + 1 = 0 \rightarrow a = 1$$

$$x^r + 2(a+1)x + 2a - 1 = 0 \xrightarrow{a=1} x^r + 4x + 1 = 0 \rightarrow \boxed{a = 1 \text{ (جواب)}}$$

$$2x^r - vx^r - a = 0 \rightarrow 2p^r + 23p + 23 = ?$$

$$x^r = t \rightarrow t^r - vt - a = 0 \rightarrow t = \frac{v + \sqrt{v^2 + 4a}}{2} \rightarrow x^r = \frac{v + \sqrt{49}}{2}$$

$$\rightarrow 3 = 0 \Rightarrow p = -\left(\frac{v + \sqrt{49}}{2}\right) \rightarrow 2p^r = 29 + v\sqrt{49} \text{ (جواب)}$$

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$$y = kx^r - \epsilon x - 4 \text{ و } y = -\epsilon x - \epsilon$$

$$\text{ext} \left\{ \begin{aligned} \frac{-b}{ra} &= \frac{\epsilon}{rk} = \frac{r}{k} \\ \frac{-\Delta}{\epsilon a} &= -\frac{(14 + 2\epsilon k)}{\epsilon k} \rightarrow \frac{-\epsilon(\epsilon + 4k)}{\epsilon k} = \frac{-\epsilon - 4k}{k} \end{aligned} \right.$$

$$y = -\epsilon x - \epsilon \rightarrow \frac{-\epsilon - 4k}{k} = -\epsilon x \frac{r}{k} - \epsilon \rightarrow \frac{-\epsilon - 4k}{k} = -\frac{1}{k} - \frac{\epsilon x}{k}$$

$$-\frac{4}{k} = -1 - \epsilon k \rightarrow -\epsilon + 1 = 4k \rightarrow k = 2 \rightarrow \frac{-\epsilon - 4k}{k} = \frac{-\epsilon - 8}{2} = -\frac{14}{2} = -7 \text{ (جواب)}$$

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$$y = -mx^r + m(x+1) \quad y = -m - x$$

$$-mx^r + m(x+1) = -m - x \rightarrow mx^r - (m+1)x - (m+1) = 0 \rightarrow \Delta < 0$$

$$(m+1)^r + \epsilon m(m+1) = 2m^r + 4m + 1 < 0 \rightarrow (m+1)\left(m + \frac{1}{2}\right) < 0 \rightarrow -1 < m < -\frac{1}{2}$$

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