

نام و نام خانوادگی شماره (۱۴) کلاس پاسخنامه تشریحی تکلیف شماره (۱۴) کلاس (۱۴).....

$$\Delta = (b)^2 - 4(1)(-1) = b^2 + 12$$

$$\rightarrow \frac{-\Delta}{2a} = \frac{-(b^2 + 12)}{-4} = \frac{b^2 + 12}{4} = v \rightarrow b^2 + 12 = 28 \rightarrow b^2 - 16 = 0 = (b-4)(b+4)$$

$$\Rightarrow b = \pm 4$$

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الف) $f(x) = x^2 + 2x + 1 = 0 \rightarrow x^2 + 2x + 1 = 0 \rightarrow x^2 + 2x + 1 = 0 \rightarrow x^2 + 2x + 1 = 0 \rightarrow x^2 + 2x + 1 = 0$

ب) $f(x) = (x-1)^2 - 2(x-1) - 1 = 0 \rightarrow (x-1)^2 = 2 \rightarrow x^2 - 2x + 1 = 2 \rightarrow x^2 - 2x - 1 = 0 \rightarrow (x-1)(x+1) = 0$

$\rightarrow x = 1 \Rightarrow x - 1 = 0 \rightarrow x^2 + 1 = 0$ $\Delta < 0$ (ریشه ندارد)

$\rightarrow x = -1 \Rightarrow x - 1 = -2 \rightarrow x^2 - 2x - 1 = 0 \Rightarrow x = \pm \sqrt{2}$

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$$\alpha = 4\beta \rightarrow S = \alpha + \beta = 2\beta + 1 = \frac{4 + 1}{4} = \frac{5}{4} \Rightarrow \beta + 1 = \frac{5}{4} \rightarrow \beta = \frac{1}{4}, \alpha = 1$$

$$P = \alpha\beta = 1 = \frac{m}{4} \Rightarrow m = 4$$

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$$2\alpha - \beta = 4 \Rightarrow 4\alpha - 2\beta = 8 = 2\alpha - 2\beta + \alpha + \beta = 2(\alpha - \beta) + (\alpha + \beta) = 8$$

$$\alpha + \beta = S = \frac{4}{2} = 2 \Rightarrow 2(\alpha - \beta) = 8 - 2 = 6 \Rightarrow \alpha - \beta = 3$$

$$\alpha - \beta = \frac{\sqrt{\Delta}}{|a|} \rightarrow \Delta = (4)^2 - 4(2)(m-1) = 16 + 12 - 12m = 28 - 12m$$

$$\Rightarrow \frac{\sqrt{28 - 12m}}{2} = 3 \rightarrow 28 - 12m = 36 \rightarrow 12 - 12m = 8 \rightarrow m = 1$$

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

$$\Rightarrow m = 1, m = -2 \quad \Delta > 0 \text{ (ریشه های متمایز)}$$

$m = 1 \rightarrow -x^2 + 4x - 1 = 0 \quad \Delta = 16 - 4(-1)(-1) = 12 \checkmark \Rightarrow m = 1$

$m = -2 \rightarrow 2x^2 + 4x + 2 = 0 \quad \Delta = 16 - 4(2)(2) = 0 \quad \Delta = 0$

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$$\alpha\beta^r = (\alpha\beta)(\beta) \rightarrow \alpha\beta = \rho = \frac{r}{1} = r \Rightarrow r\beta = \epsilon \rightarrow \beta = \frac{\epsilon}{r}$$

$$\beta^r = \frac{14}{9} \rightarrow \alpha = \epsilon \cdot \frac{9}{14} = \frac{9}{\epsilon} \rightarrow \alpha + \beta = \frac{9}{\epsilon} + \frac{\epsilon}{9} = \frac{9^2 + \epsilon^2}{14} = \frac{\epsilon^2}{14}$$

$$S = \frac{-(-m)}{1} = m = \frac{\epsilon^2}{14}$$

$$2x^2 - \frac{4x}{14} + r \rightarrow \Delta > 0 \checkmark$$

(1, 14)

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$$\alpha = r\beta \rightarrow S = \alpha + \beta = r\beta + \beta = \epsilon\beta = \epsilon \rightarrow \beta = 1, \alpha = r$$

$$\rho = \alpha\beta = m = r$$

$$2x^2 - rx + r \rightarrow \Delta > 0 \checkmark$$

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$$\alpha^r - v\alpha + r = 0 \Rightarrow \alpha - v + \frac{r}{\alpha} = 0 \Rightarrow \alpha + \frac{r}{\alpha} = v$$

$$\left(\alpha + \frac{r}{\alpha}\right)^r = \alpha^r + \frac{r}{\alpha^r} + r\alpha\left(\frac{r}{\alpha}\right)\left(\alpha + \frac{r}{\alpha}\right) = \alpha^r + \frac{r}{\alpha^r} + 4\left(\alpha + \frac{r}{\alpha}\right) = v^r$$

$$\Rightarrow \alpha^r + \frac{r}{\alpha^r} = v^r - \epsilon r = r\epsilon r - \epsilon r = r_0$$

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$$\text{ارتفاع رأس المثلث} \rightarrow \text{رأس المثلث} \rightarrow \frac{-b}{2a} = \frac{-40}{-20} = \frac{20}{r}$$

$$\rightarrow -10\left(\frac{20}{r}\right)^2 + 40\left(\frac{20}{r}\right) = -10\left(\frac{400}{r^2}\right) + 20\left(\frac{40}{r}\right) = 20\left(\frac{40 - 20r}{r}\right) = \frac{120}{r} = \text{مساحة (h)}$$

زمانی در لب زمین
برخورد می کند

$$\rightarrow h = 0 \Rightarrow -10t^2 + 40t = 0 = -10t(t - 4) = 0$$

$$\rightarrow t = 0 \text{ (لحظه شروع)}$$

$$t = 4 \text{ . } 00$$

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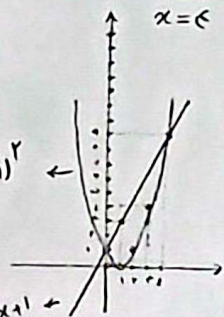
الف)

$$x = 0$$

$$x = \epsilon$$

$$(x-1)^2$$

$$2x+1$$



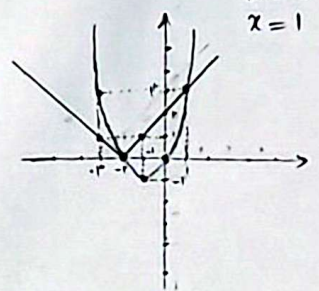
ب)

$$\text{رأس المثلث} : \frac{-r}{r} = -1$$

$$(1) r - r = -1$$

$$x = -r$$

$$x = 1$$



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