

نام و نام خانوادگی شماره ثبت کلاس شماره پرسشنامه پاسخنامه تشریحی تکلیف شماره کلاس شماره پرسشنامه A

$$y_2 = \frac{-0}{2a} = \frac{c - b^2}{2a} = \frac{-12 - b^2}{-2} = \frac{b^2 + 12}{2} = 0 \Rightarrow b^2 = -12 \Rightarrow \boxed{b = \pm 2\sqrt{3}}$$

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الف) $f(x) = x^2 + 2x + 3 = 0$ $\Rightarrow x^2 + 2x + 3 = 0$ $\Rightarrow x^2 + 2x + 1 + 2 = 0$ $\Rightarrow (x+1)^2 + 2 = 0$ $\Rightarrow (x+1)^2 = -2$ $\Rightarrow x+1 = \pm \sqrt{-2}$ $\Rightarrow x = -1 \pm \sqrt{-2}$ $\Rightarrow x = -1 \pm i\sqrt{2}$

ب) $f(x) = (x-1)^2 - 12 = 0$ $\Rightarrow (x-1)^2 = 12$ $\Rightarrow x-1 = \pm \sqrt{12}$ $\Rightarrow x = 1 \pm 2\sqrt{3}$

معادله (تابع) جواب ندارد

2

$$S = -\frac{b}{a} = -\frac{-12}{2} = 6 = \alpha + \beta \Rightarrow \alpha + \beta = 6$$

$$P = \frac{c}{a} = \frac{3}{2} = \alpha\beta \Rightarrow \alpha\beta = \frac{3}{2}$$

$$\alpha = 1 \Rightarrow \beta = 5$$

$$\beta = \alpha + 2 \Rightarrow \alpha = 1 \Rightarrow \beta = 3$$

3

$$P = \frac{c}{a} = \frac{m}{2} = \alpha\beta \Rightarrow (1)(3) = \frac{m}{2} \Rightarrow m = 6$$

$$x^2 - 12x + 12 = 0 \Rightarrow x = 6 \pm \sqrt{36 - 12} = 6 \pm \sqrt{24} = 6 \pm 2\sqrt{6}$$

$$S = \alpha + \beta = -\frac{b}{a} = -\frac{-12}{2} = 6 \Rightarrow \alpha + \beta = 6$$

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

$$3\alpha = 6 \Rightarrow \alpha = 2, \beta = 4$$

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$$P = \frac{c}{a} = \alpha\beta \Rightarrow (2)(4) = \frac{m-1}{2} \Rightarrow m-1 = 8 \Rightarrow m = 9$$

$$x^2 - 12x + 9 = 0 \Rightarrow x = 6 \pm \sqrt{36 - 9} = 6 \pm \sqrt{27} = 6 \pm 3\sqrt{3}$$

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

$$P = \alpha\beta = \frac{c}{a} = \frac{m-2}{-m} = 1 \Rightarrow m-2 = -m \Rightarrow m = 1$$

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$$P = \alpha\beta = \frac{c}{a} = \frac{m-2}{-m} = 1 \Rightarrow m-2 = -m \Rightarrow m = 1$$

$$x^2 - 12x + 1 = 0 \Rightarrow x = 6 \pm \sqrt{36 - 1} = 6 \pm \sqrt{35}$$

$P = \frac{c}{a} = \alpha\beta = 3 \Rightarrow \frac{1}{\beta} = \frac{3}{\alpha} \Rightarrow \boxed{\beta = \frac{\alpha}{3}} \quad (I)$ $\alpha\beta = 3 \Rightarrow \boxed{\alpha = \frac{9}{\beta}} \quad (II)$ $S = -\frac{b}{a} = \alpha + \beta = m$ $\begin{aligned} (I) \times (II) \\ \Rightarrow \alpha + \beta = \frac{9}{\beta} + \frac{\alpha}{3} = \frac{3\beta + \alpha}{3} = \frac{4\beta}{3} \end{aligned} \Rightarrow \boxed{m = \frac{4\beta}{3}} \rightarrow m^2 - \frac{4\beta}{3}m + 3$	۶
$\alpha = 3\beta$ $S = \alpha + \beta = -\frac{b}{a} = 4 \Rightarrow \alpha/\beta = 3 \Rightarrow \boxed{\beta = 1} \quad (I)$ $\alpha = 3\beta \Rightarrow \boxed{\alpha = 3} \quad (II)$ $P = \frac{c}{a} = m = \alpha\beta$ $\begin{aligned} (I) \times (II) \\ \Rightarrow \alpha\beta = (3)(1) = 3 \end{aligned} \Rightarrow \boxed{m = 3} \rightarrow m^2 - 4m + 3$	۷
$P = \frac{c}{a} = \alpha\beta = 2 \Rightarrow \beta = \frac{2}{\alpha} \Rightarrow \boxed{\beta = \frac{2}{\alpha}} \quad (I)$ $S = -\frac{b}{a} = 6$ $P = \frac{c}{a} = 2$ $\alpha^2 + \frac{2}{\alpha} = \frac{(1)}{\alpha^2} \Rightarrow \alpha^2 + \beta^2 = S^2 - 2PS = 36 - 4 = \boxed{32}$	۸
$h(t) = -10t^2 + 50t = -10(t^2 - 5t) = -10t(t-5) \Rightarrow -10t(t-5) = 0$ $y_1 = -\frac{5}{2a} = \frac{50 - 50}{-20} = \frac{0}{-20} = \frac{200}{20} = \boxed{10}$ $t=0$ به اعظمی ضرب زدن با تریگ برنوب $t=5$ به اعظمی برخورد تریگ بر زمین	۹
الف) $(n-1)^2 = 2n+1$ $\Rightarrow n^2 - 2n + 1 = 2n + 1 \Rightarrow n^2 - 4n = 0 \Rightarrow \boxed{n=0} \quad \boxed{n=4}$ در جواب دارد ب) $n^2 + 2n = n+2$ $\frac{-2}{-n-2} \quad n+2$ در جواب دارد (I) $n \geq -2 \Rightarrow n^2 + 2n = n+2 \Rightarrow n^2 + n - 2 = 0 \Rightarrow \boxed{n=1} \quad \boxed{n=-2}$ (II) $n < -2 \Rightarrow n^2 + 2n = -n-2 \Rightarrow n^2 + 3n + 2 = 0 \Rightarrow \boxed{n=-1} \quad \boxed{n=-2}$ (III) $n = -2$ (IV) (V) $n = 1$ (VI) (VII) $n = -2$	۱۰