عارف حاجی حیدری

(۱)

$$-\frac{\Delta}{4a} = 7 \Rightarrow \frac{-(b^2 - 4\times -1\times 3)}{4\times -1} = 7 \Rightarrow b^2 = 16$$

$$b = \pm 4$$

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(۲)

الف) $x^2 = t \Rightarrow t^2 + 2t + 3 \Rightarrow \Delta < 0$ ریشه و صفر ندارد ✗

ب) $4 - x^2 = t \Rightarrow t^2 - 2t - 15 \Rightarrow (t-5)(t+3)$

$\rightarrow t = 5$ و $t = -3$

$4 - x^2 = 5 \Rightarrow x^2 = -1$ غ ق ق

$4 - x^2 = -3 \Rightarrow x^2 = 7 \Rightarrow x = \pm\sqrt{7}$ ← صفرهای تابع

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(۳)

$$\frac{c}{a} = \frac{m-1}{3} = \alpha(2\alpha - 4)$$

$\beta = 2\alpha - 4$

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(۵)

$$\frac{c}{a} = 1 = \frac{m^2 - 2}{-m}$$ ← درصورت معکوس بودن ریشه‌ها

$\Rightarrow m^2 + m - 2 = 0 \Rightarrow m = 1$ و $m = -2$

ق ق ق ← $\Delta > 0$ و ... $\Delta = 0$ پس غ ق ق ✗

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(۶)

$\beta(\alpha\beta) = 4 \Rightarrow 3\beta = 4 \Rightarrow \beta = \frac{4}{3}$

$\frac{c}{a} = 3 \Rightarrow \frac{16}{9}\alpha \Rightarrow \alpha = \frac{9}{4}$

$\alpha + \beta = m = \frac{9}{4} + \frac{4}{3} = \frac{27+16}{12} = \frac{43}{12}$ ← مقدار m و جواب سوال

Date Subject

$a_9 B \Rightarrow B = 3a$

$\frac{c}{a} \Rightarrow m = 3a^2 \overset{a=1}{\Rightarrow} m = 3$

$\Rightarrow 3a + a = 16 \Rightarrow 4a = 16 \Rightarrow a = 4$

$a(a^2 - 7a + 12 = 0) \Rightarrow a^3 - 7a^2 + 12a = 0 \Rightarrow a^3 = 7a^2 - 12a$

الف) $(x-1)^2 = 2x + 1 \Rightarrow x^2 - 2x + 1 - 2x - 1 = 0 \Rightarrow x^2 - 4x = 0$

$\Rightarrow x(x-4) = 0 \rightarrow x = 0$

$\rightarrow x = 4$

ب) $x^2 + 2x = |x+2| \rightarrow x + 2 = x^2 + 2x$

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

$\rightarrow x = -2$

$x + 2 = -x^2 - 2$

$x^2 + 2 + 2 + x = 0 \Rightarrow x^2 + x = 0$

$\Rightarrow x(x+1) = 0 \rightarrow x = 0$

$\rightarrow x = -1$