

$$n^2 - 6n + 7$$

$$-\frac{b}{2a} = \frac{+6}{2} = 3 \quad y = 9 - 1 + 7 = 3$$

0	1	2	3
7	6	3	4



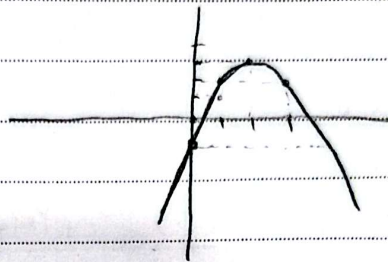
سوال ۱:

$$y = -n^2 + 6n - 1$$

$$-\frac{b}{2a} = \frac{-6}{-2} = +3 \quad y = -9 + 1 - 1 = -3$$

-9 + 1 - 1

0	1	2	3
-1	2	3	2



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$$2n^2 + (m+1)n + \frac{1}{2}m + 2 = 0$$

سوال ۲:

$$(m+1)^2 - 4(2)(\frac{1}{2}m+2) \geq 0 \quad \text{الف}$$

$$m^2 + 1 + 2m - 4m - 8 \geq 0$$

$$m^2 - 2m - 7 \geq 0 \quad \Delta = 4 + 28 = 32 \quad m = \frac{+2 \pm \sqrt{32}}{2}$$

$$m: (-\infty, -3) \cup (\infty, +\infty)$$

$$(m+1)^2 - 4(2)(\frac{1}{2}m+2) = 0$$

$$m^2 + 1 + 2m - 4m - 8 = 0 \quad m^2 - 2m - 7 = 0$$

$$\Delta = 4 + 28 = 32 \quad m = \frac{+2 \pm \sqrt{32}}{2}$$

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$$(m+1)^2 - 4(2)(\frac{1}{2}m+2) < 0$$

$$m^2 - 2m - 7 < 0 \quad m = \frac{+2 \pm \sqrt{32}}{2}$$

$$m: (-3, \infty)$$

$$(m+1)^2 - 4(2)(\frac{1}{2}m+2) > 0 \quad m^2 - 2m - 7 > 0$$

$$m: (-\infty, -3] \cup [\infty, +\infty)$$

$$y = (m-2)n^2 - 2(m+1)n + 10$$

سوال ٢:

$$\text{الف) } \frac{c}{a} > 0 \quad \frac{10}{m-2} > 0 \Rightarrow \frac{1}{-} \frac{+}{+} m: (2, +\infty) = \text{II}$$

$$+f(m^2+2m) - 50m + 10 \Rightarrow f m^2 - 32m + 14 > 0 \Rightarrow m^2 - 16m + 21 > 0 \quad 5$$

$$\frac{-b}{a} < 0 \quad \frac{+16}{m-2} < 0 \quad \frac{1}{-} \frac{+}{-} \frac{+}{+} \quad \text{I} \cap \text{II} \cap \text{III} = \emptyset \quad \Delta 4f = 14^2 < 0 \quad \text{III}$$

$$\Rightarrow \frac{c}{a} < 0 \quad \frac{-b}{a} < 0 \quad \frac{c}{a} < 0 \Rightarrow \frac{10}{m-2} < 0 \quad \frac{1}{-} \frac{+}{+} m: (-\infty, 2) \quad 7$$

$$\Delta > 0 \Rightarrow \text{محلوسات } m \quad \frac{-b}{a} < 0 \quad \frac{+16}{m-2} < 0 \quad \frac{1}{+} \frac{-}{-} \frac{+}{+} m: (-1, 2) \quad 8$$

$$y = (m-2)n^2 - 2(m+1)n + 10 \Rightarrow \Delta < 0 \Rightarrow \text{محلوسات } n \quad 15$$

$$\text{الف) } \frac{c}{a} < 0 \Rightarrow \frac{10}{m-2} < 0 \quad \frac{1}{-} \frac{+}{+} m: (-\infty, 2) \quad \text{I}$$

$$f m^2 + f + 16m - 50(m-2) \Rightarrow f m^2 - 32m + 14 > 0 \quad \text{I} \cap \text{II} = (-\infty, +1) \quad 20$$

$$m-2 < 0 \Rightarrow m < 2 \quad \text{II} \quad \Delta < 0 \quad 5$$

$$\Rightarrow n = -2 \quad m-2 > 0 \Rightarrow m > 2 \quad \checkmark \quad m-2 < 0 \Rightarrow m < 2 \quad \checkmark \quad \frac{+16}{m-2} = -2 \Rightarrow 16 = -2(m-2) \Rightarrow 4m = 4 \Rightarrow m = 1 \quad \checkmark$$

$$\frac{r n^2}{r} - (15 \sin \alpha) n + \frac{r}{r} = 0 \quad \text{سوال ١٥:}$$

$$\Delta \geq 0 \Rightarrow f \sin^2 \alpha - f \left(\frac{1}{r} \right) \left(\frac{r}{r} \right) \geq 0 \Rightarrow \sin^2 \alpha \geq 1 \Rightarrow \sin \alpha = \pm 1 \quad 5$$

$$\frac{r n^2}{r} - (1+21)m + \frac{r}{r} = 0 \quad f + \frac{r}{r} \times \frac{r}{r} = 0 \Rightarrow \frac{-b}{ra} \Rightarrow \frac{+1}{f} = \frac{r}{f} = \frac{r}{r} \quad 30$$

$$\frac{r n^2}{r} - (-2)n + \frac{r}{r} = 0 \Rightarrow f - f \times \frac{r}{r} \times \frac{r}{r} = 0 \Rightarrow \frac{-b}{ra} = \frac{r}{f} \quad \text{Arman}$$

$$y = \frac{(2n^2 - 2n - 1)(2n^2 - 2n - 3)}{1 - n^2}$$

سوال ۶

$$\begin{array}{c|c|c|c} 2n^2 - 2n - 1 & 2n - 1 & 1 & \\ \hline 1 & 2n^2 & 1 & 0 \rightarrow 2n + 1 \\ \hline (2n + 1)(n - 1) & & & \end{array}$$

$$\begin{array}{c|c|c|c} 2n^2 - 2n - 3 & 2n - 1 & 1 & \\ \hline -1 & 2 & -3 & 0 \rightarrow 2n - 3 \\ \hline \end{array}$$

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$$Z = \frac{(2n+1)(n-1)(n+1)(2n-3)}{(1-n)(1+n)} = (2n+1)(2n-3) = (2n^2 - 12n - 3) = 4n^2 + 12n + 3$$

$$y_{\max} = \frac{-\Delta}{4a} = \frac{-(12^2 - 4(-3)(4))}{4 \times -4} = \frac{12 \times 9}{4 \times -4}$$

$$m^2 - (m+2)n = 2 = 0$$

سوال ۷

$$w\left(\frac{-10}{a}\right) = w\left(\frac{c}{a}\right) + v \sim w\left(\frac{m+2}{m}\right) = w\left(\frac{-2}{m}\right) + v$$

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$$m^2 - 4m - 2 = 0$$

$$\frac{m+2}{m} = \frac{-10 + vm}{m} \sim \frac{m+2}{m} = \frac{-10 + vm}{m}$$

$$14 = cm \rightarrow m = c$$

$$\alpha + \beta = 5 - 2p = \left(\frac{4}{r}\right) - 2\left(\frac{-2}{r}\right) = \frac{4}{14} + \frac{4}{14} = \frac{8}{14} = \frac{4}{7}$$

$$\alpha + \beta = w$$

$$m^2 - 2m + 2 = 0$$

$$\alpha = w - \beta \rightarrow \frac{c}{a} \alpha + \beta = \frac{c}{a} (w - \beta) + \beta = 2$$

$$10 - 4\beta + 4\beta = 10 = 2$$

$$w(w\beta - 2) = 2\beta - 1$$

سوال ۸

$$\alpha^2 - w\alpha + 2 = 0$$

$$\beta^2 - w\beta + 2 = 0 \sim \beta^2 + w\beta - 2 = 0 \rightarrow \beta = w\beta - 2 \rightarrow \beta = \frac{w\beta - 2}{w\beta - 2}$$

$$\frac{10 - 4\beta + 4\beta}{w\beta - 2} = \frac{10}{w\beta - 2}$$

$$\beta = \frac{(w\beta - 2)(w\beta - 2)}{w\beta - 2} = 11w\beta - w\beta - 4\beta + 2 = 10w\beta - 4\beta + 2$$

$$\alpha_1 = an^2 + bn + c \quad \alpha_2 = 2n + 10$$

سوال ۹

$$c < f \rightarrow an^2 + bn + c = 2n + 10$$

$$an^2 + n(b-2) - 4 = 0$$

$$\frac{-4}{a} = -4 \rightarrow a = 1$$

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$$y = n^2 + 2n + 10$$

$$\frac{b}{a} = \frac{-2}{1} = -2$$

$$\frac{-b+2}{a} = 1 \rightarrow -b+2 = 1 \rightarrow b = 1$$

$$r n^2 + (m+1)n + m + 4 = 0 \quad \text{---} \quad \text{المعادلة}$$

جواب 10

$$r n^2 + (m+1)n + m + 4 = 0 \quad \text{---} \quad r n^2 + m n + m + 4 = 0 \quad \text{---} \quad \Delta \leq 0$$

$$m^2 - 4(m+4) \leq m^2 - 4m - 16 = 0$$

$$r n^2 + 11n + 19 = 0 \quad \text{---} \quad (n+3) \quad \text{---} \quad m = 1 \quad \text{---} \quad (m-1)(m+6) = 0$$

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$$r n^2 + 11n + 19 = 0$$

$$r n^2 - 5m + 4 = 0 \quad \text{---} \quad n^2 - 2m + 1 = 0$$

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$$r x^2 - 11x + 19 = -1 \quad \text{---} \quad \text{المعادلة}$$

$$r n^2 - 2n + 3 = 0 \quad \text{---} \quad \text{المعادلة}$$

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$$r n^2 - 2n + 3 = 0 \quad \text{---} \quad \text{المعادلة}$$

$$m = -1$$

المعادلة