

نام خانوادگی: یارمن ایمان باغنام سرعی تلفظ شماره ۲۳ - لاس رهم (صد) B

$$y \in a(x+1)^2 + 9 \xrightarrow{\text{طابقتی} (3,1)} a(4)^2 + 9 = 1 \rightarrow 14a = -1 \rightarrow a = -\frac{1}{14}$$

$$y = -\frac{1}{14}(x+1)^2 + 9 \rightarrow -\frac{1}{14}x^2 - \frac{1}{14}x + 9 \xrightarrow{-\frac{1}{14}} y = -\frac{1}{14}x^2 - \frac{1}{14}x + 1, a$$

$$\Delta > 0 \quad m^2 - 14m - 41 > 0 \quad \frac{-(-14) \pm \sqrt{(-14)^2 - 4(1)(-41)}}{2(1)} \rightarrow (-\infty, 4) \cup (17, +\infty) \textcircled{1}$$

$$p > 0 \rightarrow \frac{m+4}{p} > 0 \rightarrow m+4 > 0 \rightarrow m > -4 \textcircled{2}$$

$$\textcircled{1}, \textcircled{2}, \textcircled{3} \rightarrow (-4, -4)$$

$$s > 0 \rightarrow \frac{-m}{p} > 0 \rightarrow \frac{m}{p} < 0 \rightarrow m < 0 \textcircled{3}$$

$$s = \frac{1}{p} \rightarrow \frac{-2m+1}{p} = \frac{p}{p-m} \rightarrow q = 2m^2 - am + p = 0$$

$$p = \frac{2-m}{p} \quad s = \frac{-2m+1}{p} \rightarrow 2m^2 - am - p = 0$$

$$m = \frac{a \pm \sqrt{a^2 - 4(-p)}}{2} \rightarrow \frac{14 \pm \sqrt{14^2 - 4(1)(-41)}}{2} \rightarrow \frac{14 \pm \sqrt{196 + 164}}{2} \rightarrow \frac{14 \pm \sqrt{360}}{2} \rightarrow \frac{14 \pm 6\sqrt{10}}{2} \rightarrow 7 \pm 3\sqrt{10}$$

چون  $\Delta > 0$  - در صورتی که  $m = -1$  -  $\Delta < 0$  می شود.

$$x^2 - 1 - x = 0 \rightarrow x_1 + x_2 = 1$$

$$x_1 \times x_2 = -1$$

$$(x_1 + x_2)^2 = x_1^2 + x_2^2 + 2x_1x_2 \rightarrow x_1^2 + x_2^2 = 9$$

$$p = (x_1^2 + \frac{1}{x_1})(x_2^2 + \frac{1}{x_2}) = (x_1x_2)^2 + x_1^2 + x_2^2 + \frac{1}{x_1x_2} = (-1)^2 + 9 + \frac{1}{-1} = 1 + 9 - 1 = 9$$

$$s = x_1^2 + \frac{1}{x_1} + x_2^2 + \frac{1}{x_2} \rightarrow x_1^2 + x_2^2 + \frac{1}{x_1x_2} = 9 + \frac{1}{-1} = 9 - 1 = 8$$

$$x\sqrt{x} + 1 + \sqrt{x} - \sqrt{x} - \frac{1}{\sqrt{x}} = 2\sqrt{x} \rightarrow x\sqrt{x} - \frac{1}{\sqrt{x}} - 2\sqrt{x} = 0$$

$$x\sqrt{x} \rightarrow x^2 - 1 - 2x = 0 \rightarrow \frac{2 \pm \sqrt{4 - 4(-1)(1)}}{2} \rightarrow \frac{2 \pm \sqrt{8}}{2} \rightarrow \frac{2 \pm 2\sqrt{2}}{2} \rightarrow 1 \pm \sqrt{2}$$

$$n_1 = 3n_2$$

$$3n_2 \times n_2 \rightarrow 3n_2^2 = \frac{4}{3} \rightarrow n_2^2 = \frac{4}{9} \begin{cases} n_2 = \frac{2}{3} \rightarrow n_1 = 2 \quad 2 + \frac{2}{3} = \frac{a}{3} \rightarrow a = 8 \\ n_2 = -\frac{2}{3} \rightarrow n_1 = -2 \rightarrow -2 - \frac{2}{3} = \frac{a}{3} \rightarrow a = -8 \end{cases}$$

$$A - (-A) = 14$$

$$y = an^2 + (3+2a)n$$

از تابع کم‌ترین مقدار  $\min$  را بداند پس  $a > 0$

$$p_2 = 0 \rightarrow \frac{-3-2a}{a} > 0 \quad \checkmark \text{ یک ریشه مثبت و یکی منفی است}$$

$$\text{مجموعه از اعداد صحیح} \leftarrow \emptyset = \textcircled{1} \cap \textcircled{2} \leftarrow$$

$$\textcircled{3} \left( -\frac{3}{2}, 0 \right)$$

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

$$a \times b = 2 \times 4 = 8$$

$$y = 1 \rightarrow x^2 + 2x + 1 - b = x^2 + 2x - 3 \rightarrow b = 4$$

$$2an^2 + an - 4 = 0 \xrightarrow{\text{ریشه ها}} n_1, n_2 \rightarrow n_1 + n_2 = \frac{-a}{2a} = -\frac{1}{2}$$

$$2n^2 - an + b = 0 \xrightarrow{\text{ریشه ها}} (n_1 + 0.5), (n_2 + 0.5) \rightarrow s = n_1 + n_2 + 1 = \frac{1}{2} = \frac{a}{2}$$

$$2n^2 + n - 4 = 0 \rightarrow \frac{-1 \pm \sqrt{1+32}}{4} \rightarrow \frac{5}{4}, -\frac{9}{4}$$

$$p = -3 = \frac{b}{2} \rightarrow b = -6$$

$$\left[ \frac{ab}{c} \right] \rightarrow \left[ \frac{-4}{4} \right] = [-1] = -2$$

$$2n = \text{ریشه ها} = n_1, n_2$$

$$n^2 + 2n - 3m = 0$$

$$\rightarrow n \times n_2 = -3m \rightarrow n_2 = \frac{-3m}{n}$$

$$n^2 + 4n + m = 0$$

$$\rightarrow n \times n_2 = -m \rightarrow n_2 = \frac{-m}{n}$$

$$\rightarrow 2^2 + 4n + m = n^2 + 2n - 3m$$

$$4n = -4m$$

$$n = -m$$

$$n_2 - n_1 = \frac{-3m}{n} - \frac{-m}{n} = \frac{-2m}{n} = -2$$