

$$\frac{y}{x} = \frac{a}{r} \quad / \quad \frac{x+z}{y} = \frac{1+\sqrt{5}}{r} \quad / \quad \text{فواسته سوال} \quad \frac{y(x+z)}{yx} = 1 + \frac{z}{x}$$

$$y = \frac{r}{a}x \quad \frac{x+z}{\frac{r}{a}x} = \frac{1+\sqrt{5}}{r} \Rightarrow z = -\frac{r}{a}x + \frac{r\sqrt{5}}{a}x \rightarrow 1 + \frac{\frac{r}{a}x + \frac{r\sqrt{5}}{a}x}{x}$$

$$\rightarrow \frac{r+r\sqrt{5}}{a}$$

$$\boxed{\frac{z}{x}} y \quad z = \sqrt{x^2 + y^2} \quad \frac{1+\sqrt{5}}{r} = \frac{\sqrt{x^2 + y^2}}{x} \rightarrow r\sqrt{x^2 + y^2} = x(1+\sqrt{5}) \quad \text{توان ۲}$$

$$r(x^2 + y^2) = x^2(1+\sqrt{5})^2 \Rightarrow rx^2 + ry^2 = 4x^2 + 2\sqrt{5}x^2 \Rightarrow ry^2 = x^2 + \sqrt{5}x^2$$

$$y^2 = \frac{x^2 + \sqrt{5}x^2}{r}$$

$$\text{فواسته سوال: } \left(\frac{x}{y}\right)^2 = \frac{x^2}{y^2} = \frac{\frac{x^2}{1}}{\frac{x^2(1+\sqrt{5})}{r}} = \frac{r}{1+\sqrt{5}}$$

$$3a + \sqrt{a^2 + 4a} = 2 \Rightarrow \sqrt{a^2 + 4a} = -3a + 2 \quad \text{توان ۲} \quad \begin{cases} \text{مورد سوال را نمی دهد} \\ \text{تقریباً معتدل} \end{cases}$$

$$va^2 - 14a + 4 = 0 \quad \begin{cases} a = 2 \\ a = \frac{2}{3} \checkmark \end{cases}$$

$$\frac{a+1}{a} = \frac{9}{r}$$

$$\frac{\sqrt{n+1}}{\sqrt{n-1}+3} - \frac{\sqrt{n+1}}{3-\sqrt{n-1}} = -\frac{2\sqrt{n^2-1}}{10-n} = \frac{n-1}{\sqrt{n-1}} \rightsquigarrow -2\sqrt{(n-1)^2(n+1)} = (10-n)(n-1) \quad \text{توان ۲}$$

$$4(n-1)^2(n+1) = (10-n)^2(n-1)^2 \Rightarrow 4(n+1) = (10-n)^2 \quad \begin{cases} n_1: 12+4\sqrt{3} \checkmark \\ n_2: 12-4\sqrt{3} \end{cases}$$

پس جواب

$$\frac{1}{\sqrt{r-n}+r} - \frac{1}{r-\sqrt{r-n}} = \frac{-2\sqrt{r-n}}{r+n} = \frac{r-n}{a\sqrt{r-n}} \Rightarrow -10(r-n) = (r+n)(r-n)$$

$$-10 = n+r \Rightarrow n = -12$$

ریشه مثبت ندارد

$$\frac{r(n/(n-1)) + 1}{(n/(n-1))^r} = \frac{19}{9} \quad n/(n-1) = t \quad \frac{rt+1}{t^r} = \frac{19}{9}$$

$$\left(\frac{t+1}{t}\right)^r = \left(\frac{19}{9}\right)^r \quad \begin{cases} t = \frac{10}{1} \rightarrow n^r - n = \frac{10^r}{10} \Rightarrow S = 1 \\ t = -\frac{10}{19} \rightarrow n^r - n = -\frac{10}{19} = -3 \Rightarrow S = 1 \end{cases} \quad r = \text{مجموع}$$

$$① -n^2 + 4n - 1 \geq 0 \rightarrow -(n-4)(n-2) \geq 0 \quad n \in [2, 4] \quad \text{دامنه حل می کنیم}$$

$$-n^2(n-4) \quad r(n-4)$$

$$② -n^3 + 4n^2 + 10n - 100 \geq 0 \rightarrow -(n-4)(n-0)(n+0) \geq 0 \rightarrow n \in (-\infty, -0] \cup (0, 4] \\ \text{اگر } n=4 \text{ : اشتباه} \quad \text{if } n=4 \Rightarrow 9=9 \quad \text{است سادگی} \quad \text{مقادیر یک جواب دارد، } n=4$$

$$\begin{cases} 3y = 14 - n \\ y = |n+2| + |n-1| \end{cases}$$

$$n_1, y_1 : \begin{bmatrix} -4 \\ 14 \end{bmatrix}$$

$$n_2, y : \begin{bmatrix} 2 \\ 0 \end{bmatrix}$$

$$\text{فاصله دو نقطه : } \sqrt{(r-(-4))^2 + (v-0)^2} = \sqrt{40} = 2\sqrt{10}$$

$$\sqrt{n^2 - 4n + 4} = |n-2|$$

$$\frac{1}{r}n + 2 = |n-2| \quad \begin{cases} n \geq 2 \rightarrow \frac{1}{r}n + 2 = n-2 \rightarrow n=4 \\ n < 2 \rightarrow \frac{1}{r}n + 2 = 2-n \rightarrow n=0 \end{cases}$$

$$\overline{AB} \sim y = -n + 2$$

$$\overline{AB} \text{ : c نقطه } = \frac{4+1-2}{\sqrt{2}} = \frac{12}{\sqrt{2}} \Rightarrow S = \frac{\frac{12}{\sqrt{2}} \times 2\sqrt{10}}{2} = (12)$$

$$\frac{1}{t} + \frac{1}{t+9} = \frac{1}{10}$$

$$\frac{rt+9}{t^2+9t} = \frac{1}{10} \Rightarrow t^2 - 31t - 110 = 0 \Rightarrow \begin{cases} t = 34 \\ t = -10 \end{cases}$$