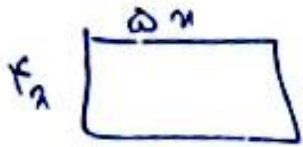


باز هم رفتن / C

بنای خدا

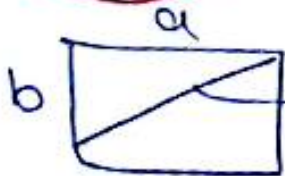
۲۰

کتابخانه
۱۸ تیر



$$\frac{S_{\text{کل}}}{S_{\text{م}}} = \frac{\left(\left(1 + \frac{\sqrt{a}}{r} \right) \times r_n \right) \times r_n}{a \times r_n} = \frac{r + r\sqrt{a}}{a} = \frac{r(1 + \sqrt{a})}{a}$$

①



$$\sqrt{a^2 + b^2}$$

$$\frac{\sqrt{a^2 + b^2}}{a} = \frac{1 + \sqrt{a}}{r}$$

$$\text{پس } \frac{a^2 + b^2}{a^2} = \left(\frac{1 + \sqrt{a}}{r} \right)^2$$

$$\rightarrow 1 + \frac{b^2}{a^2} = \frac{r + r\sqrt{a}}{r^2} \rightarrow \left(\frac{b}{a} \right)^2 = \frac{r + r\sqrt{a}}{r^2} - 1$$

$$\left(\frac{b}{a} \right)^2 = \frac{r + r\sqrt{a}}{r^2} = 1 + \frac{\sqrt{a}}{r}$$

$$\Rightarrow \left(\frac{a}{b} \right)^2 = \frac{r}{1 + \sqrt{a}}$$

$$ra + \sqrt{ra^2 + r^2a} = r \rightarrow \sqrt{ra^2 + r^2a} = r - ra \xrightarrow{\text{پس}} ra^2 + r^2a = r^2 - 2ra + ra^2$$

$$\sqrt{a^2 - 12a + 15} = 0 \rightarrow \Delta = (-12)^2 - 4(1)(15) = 144 - 60 = 84 \rightarrow \sqrt{\Delta} = 11$$

$$a = \frac{12 \pm 11}{12} \rightarrow a = 1 \rightarrow \textcircled{x}$$

$$a = \frac{r}{\sqrt{a}} \rightarrow \frac{a+1}{a} = 1 + \frac{1}{a} = 1 + \frac{r}{r} = 2 \Rightarrow \sqrt{a} = 1$$

$$\frac{\sqrt{n+1}}{\sqrt{n-1}+3} - \frac{\sqrt{n+1}}{3-\sqrt{n-1}} = \frac{n-1}{\sqrt{n-1}}$$

(4)

$$\sqrt{n+1} \left(\frac{3-\sqrt{n-1}-3-\sqrt{n-1}}{(3+\sqrt{n-1})(3-\sqrt{n-1})} \right) = \frac{n-1}{\sqrt{n-1}}$$

(5)

$$\sqrt{n+1} \left(\frac{-2\sqrt{n-1}}{9-(n-1)} \right) = \frac{n-1}{\sqrt{n-1}} \Rightarrow \frac{-2\sqrt{n+1}}{1-n} = 1$$

$$+2\sqrt{n+1} = n-1$$

$$f(n+1) = n^2 - 2n + 1$$

$$2x^2 - 2x + 9 = 0 \rightarrow \Delta = (-2)^2 - 4 \times 9 = 19 \rightarrow x = \frac{2 \pm \sqrt{19}}{4}$$

$$\text{جواب} \Rightarrow \boxed{1 \pm \sqrt{19}}$$

$$= \frac{1 \pm \sqrt{19}}{2}$$

(6)

$$\frac{1}{\sqrt{y-n}+2} - \frac{1}{2-\sqrt{y-n}} = \frac{y-n}{\omega \sqrt{y-n}}$$

(7)

$$\frac{2-\sqrt{y-n}-\sqrt{y-n}-2}{(2+\sqrt{y-n})(2-\sqrt{y-n})} = \frac{y-n}{\omega \sqrt{y-n}}$$

$$\frac{-2\sqrt{y-n}}{4-(y-n)} = \frac{y-n}{\omega \sqrt{y-n}} \Rightarrow -1 \cdot (y-n) \cdot (2+n)(y-n) - 2 + 1 \cdot n = 4 - n^2$$

$$2x^2 + 1 \cdot x - 2 = 0 \rightarrow (x+1)(x-2) = 0$$

$$\frac{i}{n^r} + \frac{1}{(1-n)^r} = \frac{14}{9} \rightarrow \frac{(1-n)^r + n^r}{n^r(1-n)^r} = \frac{14}{9}$$

$$\frac{r n^r - r n + 1}{(n - n^r)^r} = \frac{14}{9}$$

$$\frac{r(n^r - n) + 1}{(n^r - n)^r} = \frac{14}{9} \xrightarrow{n^r - n = t} \frac{rt + 1}{t^r} = \frac{14}{9}$$

$$14t^r = rt + 9 \rightarrow 14t^r - rt - 9 = 0 \rightarrow t = \frac{14 \pm \sqrt{(-14)^2 - 4(14)(-9)}}{2 \times 14}$$

$$t = \frac{14 \pm \sqrt{14^2 + 504}}{2 \times 14} \Rightarrow t = -\frac{r}{14} \Rightarrow n^r - n = \frac{r}{14} \rightarrow n^r - n + \frac{r}{14} = 0$$

$$t = \frac{r}{14} \Rightarrow n^r - n = \frac{r}{14} \Rightarrow n^r - n - \frac{r}{14} = 0$$

$$1 + 1 = 2$$

$$\sqrt{n + \sqrt{-2n^r + r n^r + r \omega n - 1}} + \sqrt{n^r + \sqrt{-2n^r + r n^r - 1}} = n + r$$

$$-2n^r + r n^r - 1 \geq 0 \rightarrow n^r - r n + 1 \leq 0 \rightarrow (n-r)(n-1) \leq 0 \rightarrow r \leq n \leq 1 \quad \textcircled{I}$$

$$-2n^r + r n^r + r \omega n - 1 \geq 0 \Rightarrow n^r(-n + r) + r \omega(n - \frac{1}{r}) \geq 0 \rightarrow (n-r)(r\omega - n) \geq 0$$

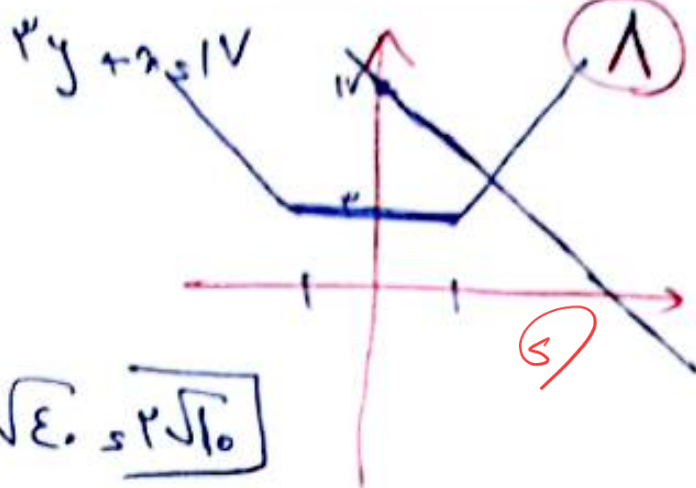
$$n \leq -\frac{1}{r} \quad \textcircled{II} \quad r \leq n \leq \omega$$

$$\textcircled{I} \cap \textcircled{II} \Rightarrow n = r \rightarrow \sqrt{r + \sqrt{0}} + \sqrt{14 + \sqrt{0}} = r + r \Rightarrow 2r = r + r \Rightarrow r = r$$

$$\boxed{n = r}$$

$$y = |n+2| + |n-1|$$

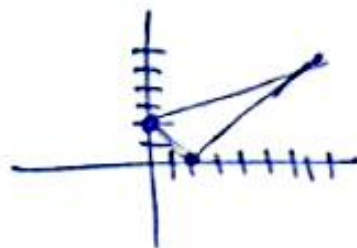
$$A \begin{vmatrix} 2 \\ 0 \end{vmatrix} \quad B \begin{vmatrix} -1 \\ 1 \end{vmatrix}$$



$$AB = \sqrt{(2 - (-1))^2 + (0 - 1)^2} = \sqrt{3^2 + 1^2} = \sqrt{10}$$

$$y = \frac{1}{r}n + 2$$

$$y = \sqrt{n^2 - 2n + 2} \Rightarrow \sqrt{(n-1)^2}$$



$$y = |n-1|$$

$$|n-1| = \frac{1}{r}n + 2$$

$$y=1 \Rightarrow n=1 \leftarrow n-1 = \frac{1}{r}n + 2$$

$$y=2, n=2 \leftarrow n-1 = \frac{1}{r}n + 2$$

$$A \begin{vmatrix} 2 \\ 1 \end{vmatrix} \quad B \begin{vmatrix} 2 \\ 1 \end{vmatrix} \quad C \begin{vmatrix} 1 \\ 1 \end{vmatrix}$$

$$AB = 2\sqrt{2}$$

$$BC = 2\sqrt{2}$$

$$AC = \frac{2\sqrt{2} \times 2\sqrt{2}}{2} = 2$$

$$\begin{aligned} \text{نیز} &\Rightarrow n \rightarrow \frac{1}{n} \\ \text{و} &\Rightarrow n+9 \rightarrow \frac{1}{n+9} \Rightarrow \frac{1}{n} + \frac{1}{n+9} = \frac{1}{r} \end{aligned}$$

$$\frac{n+n+9}{n(n+9)} = \frac{1}{r} \Rightarrow \frac{2n+9}{n^2+9n} = \frac{1}{r} \rightarrow r \cdot n + 11 = n^2 + 9n$$

$$n^2 - r \cdot n = 11$$

$$n^2 - r \cdot n - 11 = 0$$

$$n = \frac{r \pm \sqrt{r^2 + 44}}{2} \rightarrow n = r \rightarrow \checkmark$$