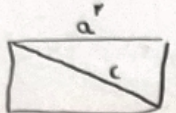


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طول = ۵ $\rightarrow \frac{\omega + \kappa}{r} = \frac{1 + \sqrt{5}}{r} \rightarrow \omega + \kappa = r + r\sqrt{5} \rightarrow \kappa = r\sqrt{5} - r \rightarrow \kappa + \omega = r + r\sqrt{5}$

$\frac{\kappa \times (r + r\sqrt{5})}{\omega \times \omega} = \frac{r + r\sqrt{5}}{\omega}$

 $\frac{\sqrt{a'^2 + b'^2}}{a'} = \frac{1 + \sqrt{5}}{r} \rightarrow r\sqrt{a'^2 + b'^2} = a' + \sqrt{5}a' \rightarrow \kappa a' + \omega b' = a' + \omega a' + r\sqrt{5}a'$

$\omega a' + \kappa b' = (r + r\sqrt{5})a' \rightarrow \omega b' = (r + r\sqrt{5})a' \rightarrow \frac{a'}{b'} = \frac{\omega}{r + r\sqrt{5}} = \frac{r}{1 + \sqrt{5}}$

$\sqrt{\kappa a' + \omega a} = r - \kappa a \rightarrow \kappa a' + \omega a = \varepsilon + 9a' - 12a \rightarrow \kappa a' - 14a + \varepsilon = 0 \rightarrow a' - 14a + r\omega$

$(a - 14)(a - r) = 0 \rightarrow a = \frac{14}{r} = r, \frac{r}{r} \rightarrow \kappa a' + \omega a = 0 \rightarrow a(\kappa + \omega) = 0 \rightarrow$

$r - \kappa a = 0 \rightarrow \kappa a \leq r \rightarrow a \leq \frac{r}{\kappa} \rightarrow a = \frac{r}{\kappa} = \frac{9}{\frac{r}{r}} = \frac{9}{r}$

$\frac{\sqrt{n+1} (r - \sqrt{n-1} - r - \sqrt{n-1})}{(r + \sqrt{n-1})(r - \sqrt{n-1})} = \sqrt{n-1} \rightarrow \sqrt{n+1} - 2\sqrt{n-1} = \sqrt{n-1} \rightarrow \sqrt{n+1} = 3\sqrt{n-1}$

$r\sqrt{n+1} = n - 1 \rightarrow r\sqrt{n+1} = n - 1 \rightarrow \kappa r + \omega = n - 1 - 4n \rightarrow \kappa r - r\omega = 5n - 1 \rightarrow r(\kappa - \omega) = 5n - 1$

$\frac{r\omega + \sqrt{19}r}{r} \rightarrow \frac{r\omega + 11\sqrt{r}}{r} = \frac{11 + \frac{\omega\sqrt{r}}{r}}{r} \rightarrow \frac{11 - \frac{\omega\sqrt{r}}{r}}{r} \rightarrow 000$

$\frac{1}{t+r} - \frac{1}{r-t} = \frac{t}{a+t} \rightarrow \frac{t-t}{\varepsilon-t} = \frac{t}{a} \rightarrow \frac{-rt}{r-t} = \frac{t}{a}$

$-rt = t(t - 14) \rightarrow t^2 - 14t = 0 \rightarrow t(t - 14) = 0 \rightarrow t = 0, t = 14$

$\sqrt{r - \kappa} = 0 \rightarrow \kappa = r \rightarrow \sqrt{r - \kappa} = \sqrt{14} \rightarrow \kappa = 14$

(۹)

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

(۵)

$$\frac{r(k^r - k)}{(k^r - k)^r} + 1 = \frac{14}{9} \rightarrow \frac{r}{k^r} + 1 = \frac{14}{9} \rightarrow 14k^r = 9k^r + 9 \rightarrow 5k^r = 9$$

$$14k^r + 9(14-k^r) \rightarrow \sqrt{4 \cdot 14 \cdot 9} = 18 \rightarrow \frac{14 \pm 18}{2 \cdot 14} \rightarrow k = \frac{1}{14} \rightarrow k^r = k - \frac{1}{14}$$

$$S = \frac{-b}{a} = 1 + 1/r$$

$$-k^r + 4k - 1 \geq 0 \rightarrow k^r - 4k + 1 \leq 0 \rightarrow (k-r)(k-\epsilon) \leq 0$$

(۷)

$$-k^r + \epsilon k^r + r \Delta k - 1 \geq 0 \rightarrow k^r(-k + \epsilon) + r \Delta(k - \epsilon) \geq 0 \rightarrow (k-r)(-k^r + r \Delta) \geq 0$$

$$-0 \leq k \leq 0, k \geq \epsilon \rightarrow -0 \leq k, r \Delta k \leq 0 \rightarrow \textcircled{\epsilon} \rightarrow \sqrt{\epsilon} + \sqrt{14} = r + \epsilon \leq r + r \sqrt{14}$$

-r	1
-rk-1	rk+1
r	r

$$rk+1, -\frac{k}{r} + \frac{14}{r} \rightarrow 4k + r, -k + 14 \rightarrow k = r, y \leq 0$$

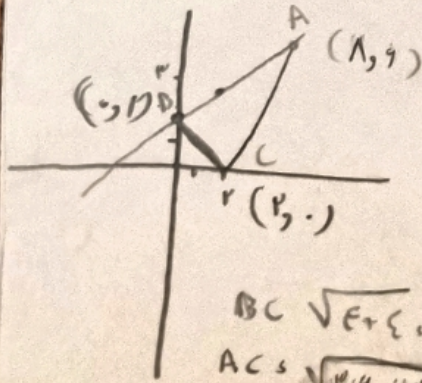
(۸)

$$AB: \sqrt{\epsilon + 14}, \sqrt{\epsilon} = r\sqrt{1}$$

$$y = \frac{1}{r}k + r \rightarrow k \leq 0 \rightarrow y \leq r \quad (r, r)$$

$$y = \sqrt{k^r - \epsilon k + \epsilon} \sqrt{(k-r)^r}, |k-r|$$

(۹)



$$k-r, \frac{1}{r}k + r \rightarrow rk - \epsilon, k + r \rightarrow k \leq 1 \rightarrow y \leq 4$$

(۵)

$$BC: \sqrt{\epsilon + \epsilon}, r\sqrt{r}$$

$$AC: \sqrt{r(4+14)}, 4\sqrt{r}$$

(۱۲)

مخرج	n	$\frac{1}{n}$
فرکانس	$n+9$	$\frac{1}{n+9}$
مخرج	n	$\frac{1}{n}$

$$\frac{1}{n} + \frac{1}{n+9} = \frac{1}{r_0} \Rightarrow \frac{n+9+n}{n^2+9n} = \frac{1}{r_0} \Rightarrow \frac{r_0+9}{n^2+9n} = \frac{1}{r_0}$$

9

$$\sum_{n=1}^{\infty} \frac{1}{n^2+9n} = \frac{1}{9} \sum_{n=1}^{\infty} \left(\frac{1}{n} - \frac{1}{n+9} \right) = \frac{1}{9} (1 + \frac{1}{2} + \dots + \frac{1}{8}) = \frac{1}{9} \left(\frac{1}{8} \right) = \frac{1}{72}$$