

$$a = \frac{\Delta y}{\Delta x} = \frac{14}{-2} = -7$$

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معادله خط $a = -7$

نقطه از روی خط $(\frac{r+1}{2}, -\frac{r+1}{2}) = (3, 1)$

$y = -7x + b \Rightarrow 1 = -7 \times 3 + b \Rightarrow b = 22$ $b = 22$

$y = -7x + 22$ $y = x + 14$

A (3, 1)
B (-5, 7)
C (-1, 3)

میدان

$|BC| = \sqrt{(\Delta y)^2 + (\Delta x)^2} = \sqrt{(4-3)^2 + (-6+1)^2} = \sqrt{26}$
 $|BC| = a$

معادله خط BC $y = -\frac{5}{6}x + \frac{17}{6}$

فاصله نقطه از خط $= \frac{|\frac{5}{6} \times 3 + 1 - \frac{17}{6}|}{\sqrt{\frac{25}{36} + \frac{1}{4}}} = \frac{|\frac{5}{2} - \frac{17}{6}|}{\frac{\sqrt{13}}{6}} = \frac{1}{\sqrt{13}} \times \frac{6}{\sqrt{13}} = \frac{6}{13}$ $\frac{6}{13}$

$\omega = 2, 1 \Rightarrow 2, 2$

$ky - x = 1 \xrightarrow{\times 2} 2ky - 2x = 2$

$ky = ax = 2 \Rightarrow a = 2$

$S_0 = 2r^2 \Rightarrow R \times (\frac{2\sqrt{5}}{\omega})^2 \Rightarrow \frac{9}{\omega} R$

if $\pi = 3 \Rightarrow \frac{2\sqrt{5}}{\omega}$

if $R = 5, 14 \Rightarrow \omega = 4, 52$

$\frac{|e - c'|}{\sqrt{a^2 + b^2}} \Rightarrow \frac{|14 - 2|}{\sqrt{2}} = \frac{12}{\sqrt{2}} = 6\sqrt{2}$

$\frac{4\sqrt{5}}{\frac{1}{2}} = \frac{4\sqrt{5}}{1} = 4\sqrt{5} \Rightarrow \frac{4\sqrt{5}}{a} \Rightarrow \frac{4\sqrt{5}}{a} = 4\sqrt{5} \Rightarrow a = 1$

A | 2 |
B | 1 |
C | -1 |

میدان

$u = (\frac{r+1}{2}, \frac{r+1}{2}) = u(3, 2)$

$a = \frac{r-1}{r-1} = 1$

$y = -x + b \Rightarrow r = r + b \Rightarrow b = 0$
 $y + x = 0 \Rightarrow 0$

فاصله نقطه از خط $= \frac{|-1 - 3\omega|}{\sqrt{10}} = \frac{9}{\sqrt{10}} = 3\sqrt{10}$

$\frac{10\sqrt{10}}{10} = \sqrt{10}$

$(\frac{r}{\sqrt{10}})^2 + x^2 = 1 \Rightarrow \frac{r^2}{10} + x^2 = 1 \Rightarrow x^2 = 1 - \frac{r^2}{10} = 1 - \frac{10}{10} = 0 \Rightarrow x = 0$

$x = 0$

فاصله دو نقطه $= \sqrt{\Delta x^2 + \Delta y^2} = \sqrt{(4-1)^2 + (5-2)^2} = \sqrt{10}$

میانگین $= \frac{-m+1}{-2m-5} = \frac{m+1}{2m-5}$

$\Rightarrow \frac{m+1}{2} \times \frac{2m-5}{2m-5} = -1 \Rightarrow \frac{(m+1)(2m-5)}{(2m-5)(2m-5)} = -1$

میانگین $= \frac{-(2m-2)}{2m-5}$

$= 0(m+1)(2m-2) = (2m-2)(2m-5)$

$= 0(m+1)(2m-2) = 2m^2 + 2m - 2(2m-5) = 2m^2 + 2m - 4m + 10 = 2m^2 - 2m + 10 = 0$

$2m^2 + 2m - 2(2m-5) = 0 \Rightarrow 2m^2 - 2m + 10 = 0$

$\Delta = (-2)^2 - 4(2)(10) = 4 - 80 = -76 < 0 \Rightarrow$ معادله برای m جواب ندارد

$$\begin{cases} AB: x+y=1 \\ AC: y=2x-1 \\ BC: x+y=2 \end{cases} \Rightarrow \begin{cases} y = -x+1 \rightarrow B(0,1) \\ y = 2x-1 \rightarrow A(1,1) \\ y = 2-x \rightarrow C(\frac{2}{3}, \frac{4}{3}) \end{cases}$$

$$M(\frac{\frac{2}{3}+\frac{1}{3}}{2}, \frac{\frac{4}{3}+\frac{1}{3}}{2}) = M(\frac{1}{2}, \frac{5}{6}) \Rightarrow AM = \sqrt{(\frac{1}{2}-1)^2 + (\frac{5}{6}-1)^2} = \frac{\sqrt{10}}{6} = AM$$

$$AM \perp BC \Rightarrow a = -1 \Rightarrow y+x=1 \quad \text{Area } \triangle ABC = \frac{1}{2} \sqrt{1+1} = \frac{1}{\sqrt{2}} \Rightarrow AH = \frac{\frac{\sqrt{10}}{6} \cdot \frac{1}{\sqrt{2}}}{\frac{1}{\sqrt{2}}} = \frac{\sqrt{10}}{6}$$

$$\frac{x}{a} + \frac{y}{b} = 1 \Rightarrow \frac{-b}{a} = -\frac{1}{r} \quad d = \frac{|ab|}{\sqrt{a^2+b^2}} \Rightarrow d = \sqrt{r} \quad b = \frac{a}{r}$$

$$\frac{b}{a} = -\frac{1}{r} \quad b = \frac{a}{r} \Rightarrow b^2 + a^2 = a^2 \Rightarrow ab = a + \frac{a}{r} = \frac{a(r+1)}{r}$$

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

$$b = \frac{a}{r} = 1 \Rightarrow A(a,0) = (1,0) \quad B(0,1) \quad AB = \sqrt{1^2 + 1^2} = \sqrt{2}$$

$$\begin{cases} my - rx = 1 \Rightarrow y = \frac{r}{m}x + \frac{1}{m} \\ y + nx = 1 \Rightarrow y = -nx + 1 \end{cases} \Rightarrow \frac{rx}{m} + \frac{1}{m} = -nx + 1 \Rightarrow rx + 1 = -mx + m + 1 \Rightarrow rx + mx = m \Rightarrow x = \frac{m}{r+m}$$

$$S = \frac{1}{r} \left| \begin{vmatrix} x_1 & y_1 & 1 \\ x_2 & y_2 & 1 \end{vmatrix} \right| = \frac{1}{r} \left| \begin{vmatrix} \frac{m}{r+m} & \frac{r}{m} \cdot \frac{m}{r+m} + \frac{1}{m} & 1 \\ 0 & 1 & 1 \end{vmatrix} \right| = \frac{1}{r} \left| \frac{m}{r+m} - \frac{r}{r+m} \right| = \frac{1}{r} \left| \frac{m-r}{r+m} \right|$$

$$x=0 \quad y = r(0) - r = -r \quad \text{Point } (r, -r) \rightarrow x' = r(0) - 0 = r \quad y' = r(-r) - (-r) = -r^2 + r = -1$$

$$\text{Point } (r, -1) \quad y+1 = r(x-r) \Rightarrow y+1 = rx-r \Rightarrow y = rx-1$$

$$y = x + a \Rightarrow y - x = a \Rightarrow a = 1 \Rightarrow y - x = 1 \Rightarrow y = x + 1 \Rightarrow y = -x + r \Rightarrow y = -x + 1 \Rightarrow y = x + a \Rightarrow y = 1$$

$$A'(a,b) \quad A'(-1-r, r-(-r)) = (-1-r, 2r) \quad r(b-a) = r(4) - (-r) = 15$$