

تکلیف ۱۷

پایه دهم (ف)

تاریخ کتبه

$A(-2, k)$

$B(5, m)$

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

(۱)

$m = \frac{\Delta y}{\Delta x} = -\frac{1}{r}$

$\frac{k-m}{-2-5} = -\frac{1}{r} \rightarrow k-m = r$

طول $AB = \sqrt{r^2 + 9} = r\sqrt{5}$

$S = r\sqrt{5} \times r\sqrt{5} = 5r^2$

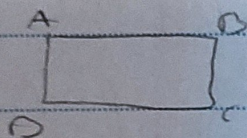
$A(-2, 5)$

$B(2, 1)$

$C(m, y)$

$D(-1-a, y+r)$

(۲)



$AB \parallel CD \rightarrow m_{AB} = m_{CD} \rightarrow \frac{r}{-2} = \frac{r}{-1-a} \rightarrow a = \frac{r}{r+1}$

$AD \perp AC \rightarrow m_{AD} \times m_{AC} = -1 \Rightarrow \frac{r}{-1-a} \times \frac{y}{y+r} = -1$

$-\frac{r}{1} \times \frac{1-y}{m} = -1 \Rightarrow \frac{r(1-y)}{m} = 1 \rightarrow y = r$

$\sqrt{4+16} = 2a$

$\sqrt{\frac{4}{r^2} + 1} = \frac{2}{r} = 2a \Rightarrow r = 2(a + \sqrt{1+a^2}) = 1.5$

$r_{max} + (m^2 - 1)y = r$

$(m^2 - 1)y = -r_{max} + r \rightarrow y = \frac{-r_{max}}{m^2 - 1} a + \frac{r}{m^2 - 1}$

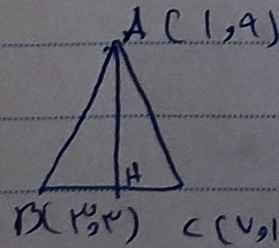
(۳)

$\tan 45^\circ = \sqrt{r} \rightarrow \frac{-r_{max}}{m^2 - 1} = \sqrt{r} \rightarrow \sqrt{r_{max}^2 + r_{min}^2} = \sqrt{r} = 0$

$m^2 + r_{min} - r = 0 \rightarrow (m + r)(m - 1)$

$m - m_1 = \frac{\sqrt{r}}{r} \Rightarrow (-\sqrt{r}) = \frac{(\sqrt{r})}{r}$

$-\sqrt{r} = \frac{-r}{\sqrt{r}} \Rightarrow \frac{1}{\sqrt{r}} = \frac{\sqrt{r}}{r}$



$AH = 9 \rightarrow$ Distance from A to BC

(۴)

$m_{BC} = \frac{11-2}{4-2} = r$

$y - r = r(m - r) \rightarrow y - r_{min} + r = 0$

$AH = \frac{|9 - r - r|}{\sqrt{1+r^2}} = \frac{1.7 \times \sqrt{5}}{\sqrt{5}} = r\sqrt{5}$

$AB \perp r_y + r_{ax} = v$

$AC \perp r_y - r_{ax} = 1v$

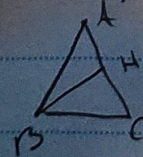
$BC \perp r_y - v_{ax} = -1v$

(۵)

$BH = 0$

$AC \perp BC$

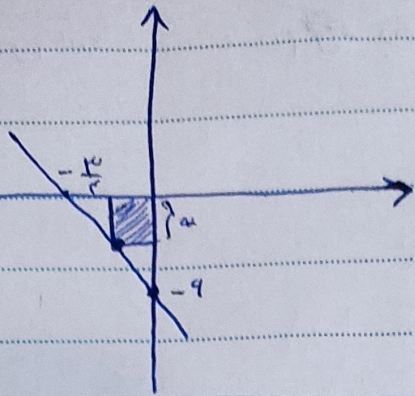
$BC \perp r_y - v_{ax} + 1v = 0$



$BH = \frac{|9 - 1 - 1|}{\sqrt{17+9}} = \frac{7}{5}$

$AB \perp r_y + r_{ax} - 1v = 0$

$11a - rv = 0 \rightarrow a = r$
 $y = +1$



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

(2)

$$ra = \frac{r}{r} - \frac{r}{r}a \Rightarrow \frac{r}{r}a = \frac{r}{r} \Rightarrow a = \frac{r}{r}$$

$$p, k = a\sqrt{r} = \frac{r}{r}\sqrt{r}$$

$$y = a\alpha + 1$$

$$y - a\alpha = 1$$

$$S = 1$$

$$ay - a = a - 1$$

$$y = \frac{1}{a}\alpha + \frac{a-1}{a}$$

$$k = a$$

(V)

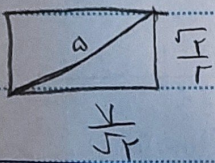
در این حالت، خط از خط اول عبور می‌کند

$$a = \frac{1}{a} \rightarrow a^2 = 1 \rightarrow a = \pm 1$$

$$\xrightarrow{a=1} y = a + 1, y = a \quad (1, 2) \quad r = 1, 1 \checkmark$$

$$\begin{aligned} y - a &= 0 \\ y - a - 1 &= 0 \end{aligned} \rightarrow \frac{|c - c'|}{\sqrt{a^2 + b^2}} = \frac{1}{\sqrt{r}} = \frac{r}{r}$$

$$(a=-1) \quad y = -a + 1, y = -a + r \quad (1, 2) \quad x$$



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

$$S = \frac{1}{\sqrt{r}} \times \frac{\sqrt{r}}{r} = \frac{1}{r} = \frac{r}{r}$$

$$A(E, a)$$

$$a - 4y = 1$$

$$\left(\frac{V}{r}, \frac{1}{r}\right) \text{ سید جاب}$$

(1)

$$y = \frac{1}{r}\alpha - \frac{1}{r}$$

$$m_{AC} = -r \rightarrow y = -r(a - r)$$

$$y = -ra + 1r$$

$$-ra + 1r = \frac{1}{r}\alpha - \frac{1}{r} \rightarrow \alpha = r, r \quad y = 0, 9$$

$$AC = \sqrt{(r-r)^2 + (1-0)^2} = 0, 9\sqrt{1}$$

$$BC = \sqrt{(r-r)^2 + (1-0)^2} = 0, 9\sqrt{1}$$

$$S = \frac{AB \times BC}{r} = \frac{0, 9\sqrt{1} \times 0, 9\sqrt{1}}{r} = 1, 8 \frac{r}{r}$$

$$\left(-\frac{1}{r}, a\right) \quad \left(-\frac{1}{r}, b\right)$$

$$m = \sqrt{r}$$

(9)

$$m = \sqrt{r} \rightarrow \frac{b-a}{-\frac{1}{r} + \frac{1}{r}} \rightarrow \frac{b-a}{\frac{1}{r}} = \sqrt{r} \rightarrow b-a = \frac{\sqrt{r}}{r}$$

$$\sqrt{\left(\frac{\sqrt{r}}{r}\right)^2 + \frac{1}{r}} = \frac{r}{r} = \frac{1}{r} \rightarrow p, k = a\sqrt{r} = \frac{\sqrt{r}}{r}$$

$$c(-r_0 - R) \sqrt{r^2 + r^2} = d \rightarrow \textcircled{r} = d$$

10

$$m_{OA} = \frac{c}{\mu} \rightarrow m_{BC} = \frac{c}{\mu} \Rightarrow BC \Rightarrow y = \frac{c}{\mu} x + b \Rightarrow \mu y - cx - \mu b = 0$$

$$\frac{\mu y - cx - \mu b}{d} = d \Rightarrow |- \mu b| = \mu d \rightarrow b = \frac{\mu d}{c} / d - \frac{\mu d}{\mu} \omega \varepsilon$$

$$BC \rightarrow y = \frac{c}{\mu} x + \frac{\mu d}{\mu} \rightarrow BC: -cx + \mu y - \mu d = 0 \quad m_{AB} = -\frac{c}{\mu}$$

$$y + \frac{c}{\mu} = -\frac{c}{\mu} (x + \mu) \Rightarrow y = -\frac{c}{\mu} x - \frac{\mu d}{\mu} \rightarrow AB: \mu x + cy + \mu d = 0$$

$$x = \frac{-\mu d}{-14 - 9} = -1 \quad y = \frac{1 \cdot -14}{-14 - 9} = -1 \Rightarrow x = -1, y = -1 \Rightarrow +v$$