Subject:
Year. Month. Date.

(۳) چون موازی اند شیب ها برابر است ۰/۵

$$\begin{cases} 4y - ax + 2 = 0 \\ 2y - x - 7 = 0 \end{cases}$$

$$\begin{cases} 4y - 2x + 2 = 0 \\ 2y - x + 1 = 0 \end{cases}$$

$S = \pi r^2 \Rightarrow \frac{16}{5}\pi$

$d = \frac{|1-8|}{\sqrt{4+1}} = \frac{8}{\sqrt{5}}$ $\qquad \frac{\frac{8}{\sqrt5}}{\frac{2}{1}} = \frac{8}{2\sqrt5} = \frac{4}{\sqrt5}$

$\frac{-a}{b} = \frac{1}{2}$ (4)

$\begin{cases} 2y - x = 7 \\ 4y - ax = 2 \end{cases} \rightarrow a = 2$ $\qquad d = \frac{6}{\sqrt5} \rightarrow$ شعاع $= \frac{3}{\sqrt5}$ $\qquad S = \pi \times \frac{9}{5} = \frac{9}{5}\pi$

(۴)

$m_{AB} = \frac{2}{-2} = -1$ $\qquad M \,|\, \frac{5}{2}$ $\qquad H \,|\, \frac{7}{2}, \frac{5}{2}$

(۲)

$MH = \sqrt{\frac{1}{4} + \frac{1}{4}} = \sqrt{\frac{2}{4}}$

$y = -x + b$ $\qquad m_{CH} = 1$

$1 = -4 + b$ $\qquad y = x + b$

$b = 5$ $\qquad -3 = -1 + b$

$b = -2$

$y = x - 2$

$$\begin{cases} -x + 5 - y = 0 \\ x - 2 - y = 0 \\ x - 5 + y = 0 \end{cases}$$

$2x - 7 = 0$

$x = \frac{7}{2}$

$\frac{7}{2} - 2 = y \rightarrow y = \frac{3}{2}$

$3 - \frac{7}{2} = -\frac{1}{2}$

$2 - \frac{5}{2} = \frac{1}{2}$

$\frac{7}{2} - \frac{5}{2} = \frac{1}{2}$

$\frac{5}{2} - 2 = -\frac{1}{2}$

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(۵)

$\frac{2 - 3m}{5 - m} = \frac{-2m + 4}{m + 1}$

(۳)

$(m+1)(2-3m) = (-2m+4)(5-m)$

$2m^2 - 14m + 20 = -3m^2 - m + 2$

$5m^2 - 13m + 18 = 0$

$m^2 - 12m + 90 = 0$ به ازای هیچ m ای

$\Delta < 0 \qquad 144 - 4(90) < 0$

(۶) ۱٫۵

$$\begin{cases} 2x - y - 1 = 0 \\ x + 2y - 5 = 0 \end{cases}$$

$4x - 2y - 2 = 0$

$5x = 5$

$x = 1$

$\frac{5}{2}x = \frac{25}{2}$ $\qquad A(1,1)$

$x = 5$ $\qquad AH = \sqrt{2}$

$1 + 2y = 5$ $\qquad B = (5, -1)$

$2y = 2 \qquad y = 1 \qquad C(\frac{5}{3}, \frac{7}{3})$

$M(\frac{10}{3}, \frac{7}{3})$

$$\begin{cases} x + 2y - 5 = 0 \\ x + y - 4 = 0 \end{cases}$$

$-x - 2y + 5 = 0$

$-y - 1 = 0 \qquad y = -1$

$-1 + x - 4 = 0$

$x = 5$

$$\begin{cases} 2x - y - 1 = 0 \\ x + y - 4 = 0 \end{cases}$$

$3x = 5$

$x = \frac{5}{3}$

$\frac{5}{3} + y = 4 \qquad y = \frac{12}{3} - \frac{5}{3} = \frac{7}{3}$

$AH = \sqrt{14} = 4 \qquad \frac{AM}{AH} = \frac{5}{4}$ 3

$y = \frac{4}{m}x + 2$ $(1-m)x + 2 = \frac{4}{m}x + 2$ $y = \dots$

$y = (1-m)x + 2$ $1 - m = \pm\frac{4}{m}$ (واقع روی محور افقی (x))

$x = 0$ $(0, 2)$ $m^2 - m - 4 = 0$ $x = \frac{-2}{1-m}$

$x = \frac{-m}{2}$ واقع روی محور x، $y = 0$

قاعده: $\left|\frac{m}{2} + \frac{2}{1-m}\right|$ ← نقطه برخورد با محور $y = 2$ = ارتفاع

$h = 2$

(۸) ۱٫۷۵

$S = \left(\frac{1}{2}\left|\frac{2}{1-m} + \frac{m}{2}\right|\right) \times 2 = \frac{5}{2}$

$\frac{4}{1-m} + \frac{m}{2} = -\frac{5}{2}$ $\frac{2}{1-m} + \frac{m}{2} = \frac{5}{2} \rightarrow m = 6$

$m = \pm\sqrt{5} + 2$

ضرب مقادیر $m = -3$

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(۹)

$y = 2x - 6$ $A|^{6}_{6}$ $M|^{4}_{2}$ $A'|^{1}_{-7}$

$A|^{6}_{6}$

$\frac{3 + x'}{2} = 2$ $x' = 1$

$y = ax + b$ $-7 = 2 + b$

$-7 = 2x + b$ $b = -9$ $y = 2x - 9$ $\frac{4 + y'}{2} = -2$ $y' = -7$ (۲)

$2b - a = 12 - (-6) = 18$

(۱۰)

$A|^{1}_{4}$ $b|^{-1}_{4}$ $A'|^{-6}_{4}$

$\frac{x' + 1}{2} = -1$ $\frac{y' + 2}{2} = 4$ $A'(-6, 4)$

$-2 = x' + 1$ $y' = 6$

$x' = -3$ (۲)

$m = -1$ $y = -x + b$ $y = -x + 6$

$A|^{1}_{2}$ $-1 + b = 2$

$b = 3$ $\begin{cases} -x - y + 6 = 0 \\ x - y + 5 = 0 \end{cases}$ $-2y + 8 = 0$ $y = 4$ $x - 4 + 5 = 0$ $x = 1$

$M|^{6}_{1}$ $MA = \sqrt{25 + 0} = 5$

$m_{BC} = 2$ $m_{AH} = -\frac{1}{2}$ $\begin{cases} 2x - 11 - y = 0 \\ -\frac{1}{2}x + \frac{6}{2} - y = 0 \end{cases}$

$y = 2x + b \rightarrow -11$

$-1 = 10 + b$ $\frac{5}{2}x - \frac{25}{2} = 0$

$b = -11$ $H|^{5}_{1}$ $10 - 11 = y$

$y = 1$

$\frac{1}{2} + b = 1$

$b = \frac{6}{2}$

$y = -\frac{1}{2}(1) + b$

(۷)

$y = ax + b$

$y = -\frac{1}{2}x + A$, 0

$-\frac{1}{2}x + \frac{A}{4} - y = 0$ (۲)

$A = \sqrt{20 \times \frac{5}{4}} = 5$ $\frac{A}{\sqrt{\frac{1}{4} + 1}} = \sqrt{20}$

$y = 0 - \frac{1}{2}x + b$

$d = \sqrt{10^2 + 5^2} = \sqrt{125}$

$-\frac{1}{2}x = -5$ $B|^{10}_{0}$ $A|^{0}_{5}$ $5\sqrt{5}$

$b \leftarrow x = \frac{25}{1 + \frac{1}{4}} = 10$ (۱۰)

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Year: Month: Date: ( )

شناگل داور

خوانا، تمیز نوشته شود

(1)

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

$m_{CH} = \frac{1}{7}$

$H = \begin{matrix} 3 \\ 1 \end{matrix}$

$\frac{1}{7}x + b = y$

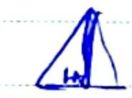
$\frac{3}{7} + b = 1$

$1 - \frac{3}{7} = \frac{4}{7}$

$\begin{cases} x = \frac{4+2}{2} = 3 \\ y = \frac{8-6}{2} = 1 \end{cases}$

$A \mid \begin{matrix} 4 \\ -6 \end{matrix}$ $B \mid \begin{matrix} 2 \\ 8 \end{matrix}$

(2)



$A \mid \begin{matrix} 3 \\ 1 \end{matrix}$ $B \mid \begin{matrix} -1 \\ 3 \end{matrix}$ $C \mid \begin{matrix} -4 \\ 7 \end{matrix}$

$m_{BC} = \frac{\Delta y}{\Delta x} = \frac{4}{-3}$

$y = ax + b$

$7 = -4a + b$

$7 = -4 \times \frac{+4}{-3} + b \longrightarrow b = 7 - \frac{16}{3} = \frac{5}{3}$

$y = \frac{-4}{3}x + \frac{5}{3}$ $y = ax + b$ $\frac{3}{4} \times 3 + b = 1$

$m_{AH} = \frac{3}{4}$ $y = \frac{3}{4}x - \frac{5}{4}$ $b = -\frac{5}{4}$

۵

$\begin{cases} -\frac{4}{3}x + \frac{5}{3} - y = 0 \\ \frac{4}{3}x - \frac{5}{4} - y = 0 \end{cases}$

$\frac{4}{3}x - \frac{5}{3} + y = 0$

$\frac{25}{12}x = \frac{35}{12} \rightarrow x = \frac{7}{5}$

$BC = \sqrt{16+9} = 5$

$5 - 2 = 3$

$-\frac{4}{3}\left(\frac{7}{5}\right) + \frac{5}{3} = y$

$-\frac{28}{15} + \frac{5}{3} = y$

$\frac{-28+25}{15} = \frac{-3}{15} = -\frac{1}{5}$

نقطه برخورد $\begin{matrix} \frac{7}{5} \\ -\frac{1}{5} \end{matrix}$

$A \mid \begin{matrix} 3 \\ 1 \end{matrix}$

$AH = \sqrt{\frac{36}{25} + \frac{64}{25}} = 2$