وسط پاره خط: (۳ و ۱)

$\frac{14}{-2} \times m = -1 \Rightarrow \frac{1}{7} = m$ ۱

$y - 1 = \frac{1}{7}(x - 3)$

$\Rightarrow 7y - 7 = x - 3 \qquad 7y - x = 4$

$\overline{BC} = \sqrt{3^2 + 4^2} = 5 \qquad BC: y - 3 = \frac{4}{-3}(x+1)$

$\Rightarrow -3y + 9 = 4x + 4 \Rightarrow 4x + 3y - 5 = 0 \qquad A(2, 1)$ ۲

$\frac{|12 + 3 - 5|}{\sqrt{3^2+4^2}} = \frac{10}{5} = 2 = \overline{AH} \qquad \overline{BC} - \overline{AH} = 5 - 2 = 3$

$4y - 2x = 14 \qquad a = 2$

$4y - ax = 2 \qquad 2r = \frac{|14 - 2|}{2\sqrt{5}} = \frac{12}{2\sqrt{5}} \Rightarrow \frac{6}{\sqrt{5}} = 2r$

$r = \frac{3}{\sqrt{5}} \Rightarrow \pi r^2 = \pi \times \frac{3}{\sqrt{5}} \times \frac{3}{\sqrt{5}} = \pi \frac{9}{5} = 1.8\pi$ ۳

$M = (3, 2) \qquad \frac{1}{-1} \times m_1 = -1 \qquad m_1 = 1 \qquad y = x - 2 \Rightarrow CH$

$y = -x + 5 \Rightarrow AB \qquad -x + 5 = x - 2$ ۴

$7 = 2x \quad x = 3.5, \; y = 1.5 \} \; H: \left[\frac{7}{2}, \frac{3}{2}\right]$

$\overline{MH} = \sqrt{\left(\frac{1}{2}\right)^2 + \left(\frac{1}{2}\right)^2} = \frac{1}{2}\sqrt{2} = \frac{1}{\sqrt{2}}$

$\frac{-(3m-2)}{(m-5)} \times \frac{-(m+1)}{-(2m-4)} = -1 \qquad -2m^2 + 14m - 20 = 3m^2 + m - 2$

$2(m-2) \Rightarrow$ هیچ مقدار ندارد ۵

$m^2 - 7m + 10$

$2m^2 - 14m + 20$

AB: $\begin{cases} x+2y=3 \\ -4x+2y=-2 \end{cases}$ AC: $A\,/\,1,1$ $\quad m=(\frac{10}{3}, \frac{2}{3})$ $\quad \overline{AM} = \frac{5\sqrt{2}}{3}$

$5x = 5$

۶ AH: $x - y = 0$

AB: $\begin{cases} x+2y=3 \\ x+y=4 \end{cases}$ BC: $B\,/\,5,-1$ $\quad$ BC: $x+y=4$, $x=2$, $y=2$ $\quad H:(2,2)$ $\quad \overline{AH} = \sqrt{2}$ $\quad \frac{\frac{5\sqrt{2}}{3}}{\frac{\sqrt{2}}{1}} = \frac{5}{3}$

AC: $\begin{cases} y-2x=-1 \\ x+y=4 \end{cases}$ BC: $C\,/\,\frac{5}{3}, \frac{7}{3}$

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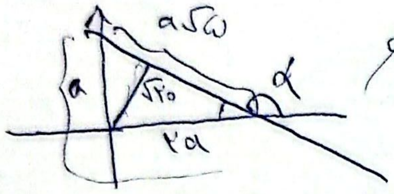

$a\sqrt{5} \times \sqrt{20} = 2a^2$

$10a = 2a^2$

$a = 5$

روش هندسی

فاصله از مبدا : $5\sqrt{5}$

$\tan\alpha = -\frac{1}{2}$

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۸ طول ۲ برابر عرض : $-4x = 2m$ $\quad x = \frac{m}{2}$ $\quad mx = x+2$, $(m-1)x = 2$ $\quad x = \frac{2}{(m-1)}$

$y + (m-1)x = 2 \times m$

$my - 4x = 2m$

$my + (m^2-m)x = 2m$

$(m^2 - m + 4)x = 0$

$\left|\frac{m}{2} - \frac{2}{(m-1)}\right| = \left|\frac{m^2-m-4}{2(m-1)}\right|$ تفاضل

$x = 0$ ✓ $\quad y = 2$ ✓ ارتفاع

$\left|\frac{m^2-m-4}{2(m-1)}\right| \times 2 \times \frac{1}{2} = \frac{5}{2}$

$\boxed{1 \times -9 = -9}$

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$2x - y = 3$ $\quad 2\times 2 + 2 = 6$

$2x - y = c$ $\quad \frac{3+c}{2} = 6$

$2x - y = 6$

$c = 9$ خط موازی

$2x - y = 9$

۱۰ تقارن محوری : $y = -x + 3$ $\quad -x+3 = x+5$, $-2 = 2x$ $\quad x=-1$, $y=4$ $\quad \begin{vmatrix} -1 \\ 4 \end{vmatrix}$

$\frac{1+x}{2} = -1$ $\quad x = -3$ $\quad A'(-3, 6)$

$\frac{2+y}{2} = 4$ $\quad y = 6$ $\quad 12 + 3 = 15$