

کلیف خارج ۱۶

معین رضی

۲۵ آفدین!

بازدهم هر ۱۳

(۱)

$$A(40-4)$$

$$D(2,1) \rightarrow u = \frac{1-(-4)}{2-4} = \frac{14}{-2} = (-7) \xrightarrow{\text{عوضه}} (+\frac{1}{7})$$

(۲)

$$\text{تقدیر میانی} \rightarrow \left(\frac{4+u}{2}, \frac{-2+1}{2}\right) \rightarrow (3,1) \rightarrow y-1 = \frac{1}{2}(x-3)$$

$$\Rightarrow y = \frac{1}{2}x + \frac{5}{2} \checkmark$$

$$BC = \sqrt{(-1+4)^2 + (3-1)^2} = \sqrt{10} = (5) \checkmark$$

(۲)

$$S_0 = \frac{1}{2} (2(1-2) + (-1)(3-1) + (-1)(1-3)) = \frac{1}{2}(4) = (2) \rightarrow AH = \frac{2 \times 1}{5} = \frac{2}{5} \checkmark$$

(۲)

$$\Rightarrow BC - AH = 2 - \frac{2}{5} = (3) \checkmark$$

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

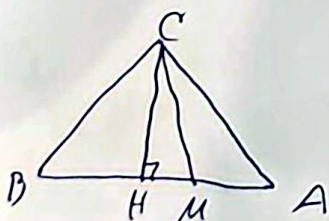
$$6y = 0x + 2 \rightarrow y = \frac{1}{3}x + \frac{2}{3}$$

(۳)

$$d = \frac{|\frac{1}{2} - \frac{1}{2}|}{\sqrt{(\frac{1}{2})^2}} = \frac{0}{\sqrt{\frac{1}{4}}} = \frac{0}{\frac{1}{2}} = 0 \Rightarrow \text{همان خط} \Rightarrow y = \frac{1}{2}x$$

(۲)

$$\text{مساحت} = x \cdot y = x \left(\frac{1}{2}x \right) = \left(\frac{1}{2}x^2 \right) \checkmark$$



(۴)

$$u = \left(\frac{4+u}{2}, \frac{1+1}{2}\right) \rightarrow (3,1)$$

(۲)

$$u_{AB} = \frac{1-3}{4-2} = \frac{-2}{2} = (-1) \rightarrow y = -x + 1 \rightarrow u_{CH} = 1 \rightarrow y = x - 2$$

$$\begin{cases} y = -x + 1 \\ y = x - 2 \end{cases} \rightarrow \begin{cases} x = \frac{y}{-1} = -y \\ y = \frac{y}{1} = y \end{cases} \Rightarrow u_H = \sqrt{(3-3)^2 + (1-2)^2} = \frac{1}{\sqrt{2}} = \left(\frac{\sqrt{2}}{2} \right) \checkmark$$

$$(3k-2)k + (5-k)y - v = 0 \rightarrow y = \frac{-3k+2}{5-k}k + \frac{v}{5-k} \rightarrow kr = \frac{-3k+2}{5-k} \quad \boxed{k \neq 5} \quad (5)$$

$$(k+1)k - (2k-5)y + 1 = 0 \rightarrow y = \frac{-k-1}{2k-5}k - \frac{1}{2k-5} \rightarrow kr = \frac{-k-1}{2k-5} \rightarrow \boxed{k \neq 5} \quad (2)$$

$$kr - kr = -1 \rightarrow \left(\frac{-3k+2}{5-k} \right) - \left(\frac{-k-1}{2k-5} \right) = -1$$

$$\Rightarrow \frac{(3k-2)(k-1)}{(5-k)(2k-5)} = -1 \rightarrow (3k-2)(k-1) = -(5-k)(2k-5)$$

باز می نویسیم $\rightarrow 5k^2 + 13k + 11 = 0 \rightarrow \Delta < 0 \rightarrow \boxed{\text{مساوی ندارد}} \quad (5)$

$$\begin{cases} AB = k + 2y = 3AD + AC \rightarrow k + 2(k-1) = 3 \rightarrow 5k = 3 \rightarrow \boxed{k = 1} \\ AC = y - 2k = 0 \\ BC = k + y = 6 \end{cases} \rightarrow y = 2 - 1 = 1 \rightarrow \boxed{A(1,1)} \quad (4)$$

$$\hookrightarrow AB, BC = (6-y) + 2y = 3 \rightarrow 6 + y = 3 \rightarrow y = -3 \rightarrow \boxed{y = -3} \quad (2)$$

$$k = 6 + 1 = 7 \rightarrow \boxed{B = (7, -1)}$$

$$\rightarrow AC, BC \rightarrow 6 - k = 2k - 1 \rightarrow 3k = 7 \rightarrow \boxed{k = \frac{7}{3}} \rightarrow y = \frac{v}{3}$$

$$C = \left(\frac{7}{3}, \frac{v}{3} \right)$$

$$AK = \sqrt{\left(\frac{7}{3} - 1 \right)^2 + \left(\frac{v}{3} - 1 \right)^2} = \sqrt{\frac{16}{9} + \frac{v^2}{9}} = \frac{\sqrt{16 + v^2}}{3}$$

$$AK = 1 \rightarrow d = \frac{|ax + by + c|}{\sqrt{a^2 + b^2}} \Rightarrow \frac{1 - \frac{v}{3}}{\sqrt{\frac{16}{9} + \frac{v^2}{9}}} = 1 \rightarrow \boxed{\frac{1 - \frac{v}{3}}{\sqrt{16 + v^2}}} = 1$$

$$\Rightarrow \frac{AK}{AH} = \frac{\frac{\sqrt{16 + v^2}}{3}}{\sqrt{16 + v^2}} = \boxed{\frac{1}{3}} \quad \checkmark$$

بازرسی

معین نموی

تلفظ شماره ۱۴

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

$$y = -\frac{1}{r}x + c \rightarrow y = -\frac{1}{r}x + d \xrightarrow{y=0} u = d \rightarrow (6, 0)$$

$$y = -\frac{1}{r}x + d \rightarrow u = -1, d = -8$$

ADJ خط عمود
- مماس خط

$$= \sqrt{(6-0)^2 + (0-0)^2} = \sqrt{36} = 6$$

$$d = \frac{|c|}{\sqrt{1 + \frac{1}{r^2}}} = \sqrt{u_0} = \frac{|c|}{\sqrt{1 + \frac{1}{r^2}}} = \frac{|c|}{\frac{\sqrt{r^2 + 1}}{r}} = \frac{r|c|}{\sqrt{r^2 + 1}} = \sqrt{r^2} \rightarrow |c| = 1$$

$$uy - vx = r \rightarrow y = \frac{ux}{r} + r \xrightarrow{y=0} \frac{ux}{r} + r = 0 \rightarrow u = -\frac{r}{x}$$

$$y + vx = u + r \rightarrow y = u(-1 - vx) + r \xrightarrow{y=0} u(-1 - vx) + r = 0 \rightarrow u = \frac{-r}{-1 - vx} = \frac{r}{1 + vx}$$

$$s = \frac{1}{r} \sqrt{u^2 - u_0^2} \rightarrow \frac{s}{r} = \sqrt{u^2 - u_0^2} \rightarrow \frac{s}{r} = \sqrt{\frac{r^2}{(1 + vx)^2} - u_0^2} \rightarrow \frac{s}{r} = \frac{r}{1 + vx} \sqrt{1 - \frac{u_0^2 (1 + vx)^2}{r^2}}$$

$$\rightarrow u - d = -u^2 + u - r \rightarrow u^2 + r - 1 = 0$$

$$-du + d = -u^2 + u - r \rightarrow u^2 - u + r = 0 \rightarrow s = -1 \rightarrow u = u$$

$$s = u - 1 = \left(-\frac{r}{1}\right)$$

$$y = vx - r \rightarrow u = (v, -r)$$

$$\rightarrow u = \frac{1}{r} \cdot u, y = \frac{1}{r} \cdot y$$

$$u = \frac{1}{r} \cdot u, y = -r - y \rightarrow y = -r - (vu - r) = -r - vr + r = -vr \rightarrow u = \frac{r}{v} - u$$

$$-r(v - u) = -1 + vu - 1 \rightarrow vu - 1 = 0$$

$$A(1,2)$$

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$$y = x + 1 \rightarrow A' = xA' = 2x(1) - xA = -2 - 1 = -3$$

(۲)

$$yA' = 2y(1) - yA = 2 - 1 = 1 \rightarrow A'(-3, 1) \checkmark$$

$$2y - x = 0 \rightarrow 2(1) - (-3) = 18 \checkmark$$

$$y - 2 = -x + 1 \rightarrow y = -x + 3$$

$$\rightarrow -x + 3 = x + 1 \rightarrow 2x = 2 \rightarrow \boxed{x = 1} \quad \boxed{y = 2}$$

پ.ن : از مصحح این برگه صفحات حی خواهم بابت دست خط بهم ، راجعت ، رباط

انگشت دست راست را هم پاره کرده بودم و دستم خوانا نبودم - بسیار تشنه ام | 

وای اشکال نداره امیدوارم زود خوب بشی ولی واقعا عالمر نویسنده