۱۷٫۲۵

Date: / / Sat Sun Mon Tue Thu Wed Fri Subject: مهتاب قدیری

۱- $\frac{-1}{2} = \frac{m-k}{4+2} \rightarrow m-k=-2$

$\overline{AB} = \sqrt{(4+2)^2+(m-k)^2} = \sqrt{45}$

$S = \overline{AB} \times \overline{AB} = 45$ (۲)

۲- $\overline{AB} = \sqrt{(1+2)^2+(4-1)^2} = 5$

$m_{AB} = \frac{4-1}{-1-2} = \frac{-3}{4} \rightarrow m_{BC} = \frac{4}{3} = \frac{y-1}{x-2} \Rightarrow y=1$

$\overline{CD} = 5 = \sqrt{(1+2x)^2+3^2} \Rightarrow 1+2x=4 \Rightarrow x=\frac{3}{2}$ (۲)

$C(\frac{3}{2}, 1)$

$\overline{BC} = \sqrt{(2-\frac{3}{2})^2+(2-1)^2} = \frac{5}{2}$

$P = \frac{5}{2} + \frac{5}{2} + 5 + 5 = 15$

۳- $y = \frac{-2m}{m^2-1} + \frac{2}{m-1} \rightarrow m = \tan 60^\circ \Rightarrow \sqrt{3} = \frac{-2m}{m^2-1}$

$\sqrt{3}m^2+2m-\sqrt{3}=0 \rightarrow m = \frac{-2 \pm 4}{2\sqrt{3}}$ ($\frac{-2}{\sqrt{3}} = -\sqrt{3}$, $\frac{2}{2\sqrt{3}} = \frac{\sqrt{3}}{3}$)

$m_2 - m_1 = \frac{\sqrt{3}}{3} + \sqrt{3} = \frac{4\sqrt{3}}{3}$ (۱٫۵)

۴- $\overline{BC}: m = \frac{11-3}{7-3} = \frac{8}{4} = 2 \rightarrow y = 2x+h \rightarrow h=-3$

$BC: y = 2x-3 \rightarrow y-2x+3=0$

$AH = \frac{|9-2+3|}{\sqrt{1+4}} = \frac{10}{\sqrt{5}} = 2\sqrt{5}$ (۲)

۵- $AB: y+2x=7 \rightarrow -2y-4x=-14$

$BC: 2y-7x=-19 \quad 2y-7x=-19$

$x=3, y=1 \quad A(3,1)$ (۲)

$BH = \frac{|4-9-17|}{\sqrt{149}} = \frac{22}{5} = 4/4$

۶- $m = \frac{-4-0}{0+\frac{3}{4}} = -8 \rightarrow y = -8x-4 \rightarrow x = \frac{-4}{9}$ $A(\frac{-4}{9}, \frac{-4}{9})$

$\overline{AO} = \sqrt{(\frac{4}{9})^2+(\frac{4}{9})^2} = \frac{4}{9}\sqrt{2}$ (۲)

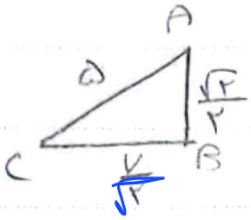
Date: / / Sat Sun Man Tue Thu Wed Fri Subject:.....

$y = ax + 1 \quad m = m' \rightarrow a = \frac{1}{a} \rightarrow a = 1 \quad \begin{cases} y = x + 1 \\ y = x \end{cases}$

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

$\overline{AC} = d = \sqrt{x^2 + x^2} \Rightarrow x = \frac{d}{\sqrt{2}}$

$AB = \frac{|c - c'|}{\sqrt{2}} = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$



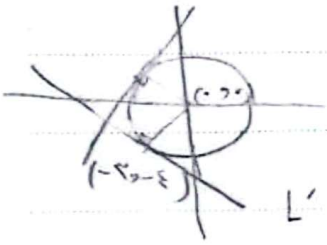
$S = \frac{1}{\sqrt{2}} \times \frac{\sqrt{2}}{2} = \frac{1}{2}$

$\frac{1}{2} = 0.5$

$\sqrt{2} = \frac{b-a}{-\frac{1}{2}-\frac{1}{2}} = \frac{b-a}{1} \rightarrow b - a = \sqrt{2}$

$\overline{AB} = \sqrt{(b-a)^2 + (\frac{1}{2} - \frac{1}{2})^2} = \frac{2}{4}$

$b\omega = \sqrt{2}\,\overline{AB}$ $\frac{\sqrt{2}}{2}$



$m_L = \frac{4}{3}, \; m_{L'} = -\frac{3}{4}$

$L: y = -\frac{3}{4}x + h \rightarrow h = -\frac{10}{4} \Rightarrow y = -\frac{3}{4}x - \frac{10}{4}$

$L': y = \frac{4}{3}x + h \rightarrow \omega = \frac{|h|}{\sqrt{1 + \frac{16}{9}}} = \frac{h}{\frac{5}{3}} \Rightarrow h = \frac{10}{3}$

$R = \omega$

$\Rightarrow L': y = \frac{4}{3}x + \frac{10}{3}$

$\star, \star \Rightarrow \frac{10}{14}x = \frac{15}{12} \rightarrow \begin{cases} x = -1 \\ y = -1 \end{cases}$

$xy = 1$

$AB^2 = AH^2 + BH^2 \rightarrow 3^2 = \left[\frac{3}{\sqrt{10}}\right]^2 + BH^2 \rightarrow BH = \frac{9}{10}$

$S = \frac{3}{\sqrt{10}} \times \frac{9}{\sqrt{10}} \times \frac{1}{2} = \frac{27}{20}$