

$$m = \frac{\Delta y}{\Delta x} \Rightarrow -\frac{1}{2} = \frac{k-m}{-4} \Rightarrow \boxed{k-m=2}$$

(۲)

$$AB = \sqrt{(k-m)^2 + (-4)^2} = \sqrt{9+16} = \sqrt{25} \text{ موع}$$

$$S = (AB)^2 = \boxed{25} \checkmark$$

$A \begin{vmatrix} 1 & 1 \\ 1 & 1 \end{vmatrix} B \quad \begin{vmatrix} 1 & 1 \\ 1 & 1 \end{vmatrix} C \begin{vmatrix} 1 & 1 \\ 1 & 1 \end{vmatrix} D$
 $x_A + x_C = x_B + x_D \Rightarrow 1 + x = 3 + (x-2) \Rightarrow 2x = 2 \Rightarrow \boxed{x = 1}$
 $y_A + y_C = y_B + y_D \Rightarrow 1 + y = 1 + y + 0$

(۳)

$m_{AB} = -\frac{1}{2} \Rightarrow m_{BC} = \frac{2}{1} \Rightarrow y-1 = \frac{2}{1}(x-3) \Rightarrow y-1 = 2(x-3) \Rightarrow y-1 = -2$
 $y = -1 \quad AB = \sqrt{14+9} = 5 \checkmark \quad BC = \sqrt{\frac{9}{4}+4} = \sqrt{\frac{25}{4}} = \frac{5}{2} \checkmark$

$$\vec{a} = \vec{b} + \vec{c} = \sqrt{3} \quad (m^2-1)y = 2 - 2mn \Rightarrow y = \frac{2}{m^2-1} - \frac{2m}{m^2-1}n$$

(۴)

$$\frac{-2m}{m^2-1} = \sqrt{2} \Rightarrow -2m = \sqrt{2}m^2 - \sqrt{2} \Rightarrow \sqrt{2}m^2 + 2m - \sqrt{2} = 0 \Rightarrow m = \frac{-2 \pm \sqrt{12}}{2\sqrt{2}} = \frac{-2 \pm 2\sqrt{3}}{2\sqrt{2}} = \frac{-1 \pm \sqrt{3}}{\sqrt{2}}$$

$$m = \frac{-1 \pm \sqrt{3}}{\sqrt{2}} \Rightarrow m = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2} \quad \text{یا} \quad m = -\frac{\sqrt{2}}{2} \quad \checkmark$$

$$m_{BC} = \frac{\Delta y}{\Delta x} = \frac{1}{2} = 2 \Rightarrow m_{AC} = -\frac{1}{2} \Rightarrow y-9 = -\frac{1}{2}(x-1) \Rightarrow y = -\frac{x}{2} + \frac{19}{2}$$

(۵)

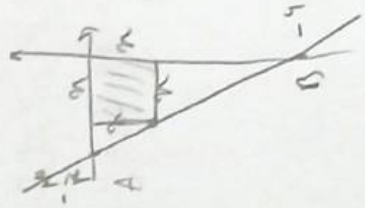
$m_{BC} : y-3 = 2(x-2) \Rightarrow y = 2x-1 \quad AB = \sqrt{(2-1)^2 + (9-5)^2} = \sqrt{20} = 2\sqrt{5} \checkmark$

$\begin{cases} y = 2x-1 \\ y = -\frac{x}{2} + \frac{19}{2} \end{cases} \Rightarrow \frac{2}{1}x = \frac{19}{2} - \frac{1}{2} \Rightarrow 2x = 9 \Rightarrow x = \frac{9}{2} \quad y = 8$

$AB: y = 2x+6 \quad AC: y = \frac{2}{3}x + \frac{16}{3} \quad BC: y = \frac{1}{3}x - \frac{19}{3}$
 $m_{AC} = \frac{2}{3} \quad m_{BC} = \frac{1}{3} \quad m_{AB} = 2$
 $AC: (y-2) = \frac{2}{3}(x-1) \Rightarrow y = \frac{2}{3}x + \frac{14}{3}$
 $BC: (y-1) = \frac{1}{3}(x-2) \Rightarrow y = \frac{1}{3}x + \frac{1}{3}$

(۶)

$AB = \sqrt{\left(\frac{1}{3}\right)^2 + \left(1 - \frac{1}{3}\right)^2} = \sqrt{\frac{1}{9} + \frac{4}{9}} = \sqrt{\frac{5}{9}} = \frac{\sqrt{5}}{3}$
 $BC = \sqrt{\left(\frac{1}{3}\right)^2 + \left(1 - \frac{1}{3}\right)^2} = \frac{\sqrt{5}}{3}$
 $AC = \sqrt{\left(\frac{2}{3}\right)^2 + \left(1 - \frac{2}{3}\right)^2} = \frac{\sqrt{5}}{3}$



$$\frac{1}{3} \leq \frac{1}{2}$$

$$\begin{array}{r} \Sigma \\ 214 \\ 1 \\ \hline \rightarrow 012 \\ 11 \\ 21 \end{array}$$

$$\begin{array}{c} 2/2 \\ \parallel \\ \leq 1/2 \\ \parallel \\ \leq \\ \uparrow \\ \leq 1/4 \\ \parallel \\ \leq 1/2 \\ 2/2 \end{array}$$

$\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

$$wV = h + h = -\sqrt{2}$$

$\begin{matrix} 2 & 1 & 2 & 2 & 1 & 2 \\ & 1 & & & 1 & \\ & \alpha & & & \beta & \\ & & & & & \uparrow \\ & & & & & \{ \\ & & & & & \downarrow \\ & & & & & \{ \\ & & & & & \alpha \\ & & & & & \beta \end{matrix}$

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$\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

$$\begin{array}{r} 11 \\ 5 \\ 1 \\ \hline 11 \\ 5 \\ 1 \\ \hline 26 \\ 1 \\ \hline 16 \end{array}$$

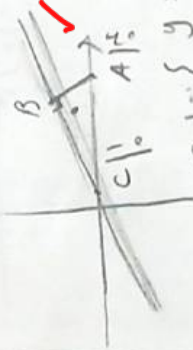
$$\frac{100}{100 - 50} = 2$$

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

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

$\frac{5}{2} \mid 2$
 (1)
 $\frac{5}{2} \mid 2$
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 (1)
 9 $\frac{1}{2}$

[illegible]



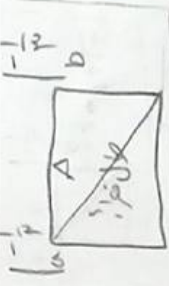
$\angle A = 40^\circ$
 $\angle B = 110^\circ$
 $\angle C = 30^\circ$
 $\angle D = 120^\circ$
 $\angle E = 130^\circ$
 $\angle F = 140^\circ$
 $\angle G = 150^\circ$
 $\angle H = 160^\circ$
 $\angle I = 170^\circ$
 $\angle J = 180^\circ$
 $\angle K = 190^\circ$
 $\angle L = 200^\circ$
 $\angle M = 210^\circ$
 $\angle N = 220^\circ$
 $\angle O = 230^\circ$
 $\angle P = 240^\circ$
 $\angle Q = 250^\circ$
 $\angle R = 260^\circ$
 $\angle S = 270^\circ$
 $\angle T = 280^\circ$
 $\angle U = 290^\circ$
 $\angle V = 300^\circ$
 $\angle W = 310^\circ$
 $\angle X = 320^\circ$
 $\angle Y = 330^\circ$
 $\angle Z = 340^\circ$
 $\angle A = 350^\circ$
 $\angle B = 360^\circ$

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

$$\beta_C = \sqrt{(v)^2 + (0,9)^2} = 0,9 \sqrt{1 + 1} = 0,9 \sqrt{2}$$

$$\frac{1}{\sqrt{10}} \times 10 = \sqrt{10} = 1.35$$

$$\begin{array}{c} \downarrow \\ \text{L}_3 = \sqrt{\frac{W}{V}} \end{array} \quad \begin{array}{c} \downarrow \\ \text{L}_2 = \sqrt{\frac{V}{W}} \end{array} \quad \begin{array}{c} \downarrow \\ \text{L}_1 = \sqrt{\frac{V}{V}} = 1 \end{array}$$



[illegible]

✓
 $\sqrt{2/2} = \sqrt{1} = 1$

$$m_0 A = \frac{P_{\text{av}}}{v} \quad v^2 = \frac{\Delta v}{\Delta t} \quad \Delta v = \int_a^b \frac{dv}{dt} dt = \left(\frac{d}{dt} \right) \int_a^b v dt$$

$$\begin{array}{r} 4 \overline{) 2} \\ 2 \\ \hline 0 \\ 2 \overline{) 14} \\ 14 \\ \hline 0 \\ 11 \\ 11 \\ \hline 0 \\ 5 \\ 5 \\ \hline 0 \\ 2 \overline{) 14} \\ 14 \\ \hline 0 \\ 11 \\ 11 \\ \hline 0 \\ 2 \overline{) 14} \\ 14 \\ \hline 0 \\ 11 \\ 11 \\ \hline 0 \\ 3 \overline{) 14} \\ 14 \\ \hline 0 \\ 11 \\ 11 \\ \hline 0 \end{array}$$

$$\frac{d}{dt} \left(\frac{1}{2} m v^2 + U \right) = 0$$

$\frac{9}{2} \times \frac{2}{3} = 3$

$\alpha \propto \frac{1}{v_x} \propto \frac{1}{v} \propto \frac{1}{\sqrt{E}}$