نام و نام خانوادگی ......سبا شفیعی...... پاسخنامه تشریحی تکلیف شماره ...۱۷... کلاس ...یازدهم دختران گروه B

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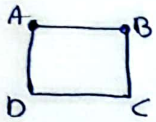
$A(-2, k)$ $B(4, m)$ شیب $= -\frac{1}{2}$



$m_{AB} = \frac{m-k}{4+2} = -\frac{1}{2}$

$\frac{2(m-k)}{2} = -\frac{6}{2} \to m-k = -3$

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

$AB = \sqrt{9 + 36} = \sqrt{45}$

$S_{\square} = (\sqrt{45})^2 = \boxed{45}$

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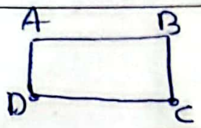
$A(-1, 4), B(3, 1), C(x, y), D(-1-x, y+3)$

محیط مستطیل؟



$x_A + x_C = x_B + x_D$

$-1 + x = 3 - 1 - x \Rightarrow \boxed{x = \frac{3}{2}}$

$y_A + y_C = y_B + y_D$

$4 + y = 1 + y + 3 \Rightarrow (-\frac{3}{2}) \times 4 + (-3)(y-1) = 0$

بردار AB $\Rightarrow (-3, 4)$ ، بردار BC $\Rightarrow (3-x, y-1)$; $\times = 0$; $\boxed{y = -1}$

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

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

محیط مستطیل $\Rightarrow 2(5 + \frac{5}{2}) \Rightarrow \boxed{15}$

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$2mx + (m^2-1)y = 3$ $\quad \tan\alpha \Rightarrow 60^\circ = \sqrt{3}$

اختلاف مقادیر m؟

$m = \frac{-2m}{m^2-1} = \sqrt{3} \to \sqrt{3}m^2 - \sqrt{3} + 2m = 0$

$\Delta \Rightarrow 4 - 4(-\sqrt{3})(\sqrt{3}) \Rightarrow 4 + 12 = 16$

ریشه‌ها $\Rightarrow \frac{-2 \pm \sqrt{16}}{2\sqrt{3}}$

$m_1 = \frac{-2-4}{2\sqrt{3}} \Rightarrow \frac{-6}{2\sqrt{3}} = -\frac{3}{\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}} = -\sqrt{3}$

$m_2 = \frac{-2+4}{2\sqrt{3}} \Rightarrow \frac{2}{2\sqrt{3}} = \frac{1}{\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}} = \frac{\sqrt{3}}{3}$

$\frac{\sqrt{3}}{3} + \frac{3\sqrt{3}}{3} = \boxed{\frac{4\sqrt{3}}{3}}$

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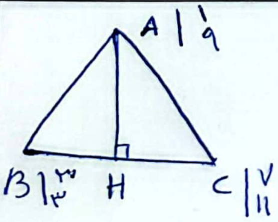

$AH = ?$ $\boxed{2\sqrt{5}}$

$m_{BC} = \frac{8}{4} = 2$

$y - y_1 = 2(x - x_1)$

$y - 3 = 2x - 6 \to y = 2x - 3 \Rightarrow y - 2x + 3 = 0$

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

$2\sqrt{5} = \frac{10\sqrt{5}}{5}$

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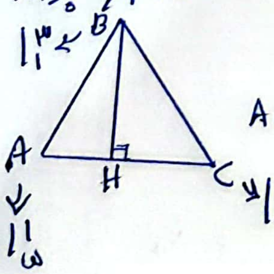
$AB: y + 2x = 7$, $AC: 4y - 3x = 17$, $BC: 2y - 7x = -19$

طول ارتفاع BH؟



$y = \frac{3}{4}x + \frac{17}{4}$ $\quad y = \frac{7}{2}x - \frac{19}{2}$

A محل تقاطع $\Rightarrow y = (-2x + 7 = \frac{3}{4}x + \frac{17}{4})^{\times 4}$

$x = 1$ و $y = 5$

C محل تقاطع $\Rightarrow (\frac{3}{4}x + \frac{17}{4} = \frac{7}{2}x - \frac{19}{2})^{\times 4}$

$x = 5$ و $y = 8$

B محل تقاطع $\Rightarrow (-2x + 7 = \frac{7}{2}x - \frac{19}{2})^{\times 2}$

$x = 3$ و $y = 1$

$BH = \frac{|\frac{9}{4} + 1 - \frac{17}{4}|}{\sqrt{(\frac{3}{4})^2 + 1}} = \boxed{\frac{22}{5}}$

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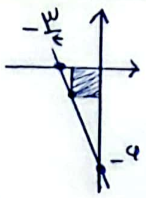

$m = \frac{-6-0}{0+\frac{3}{4}} = -8$

$y = -8x - 6$

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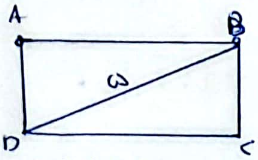
$y - ax = 1 \;,\; ay - x = a - 1$ (نقل از ... $\frac{1}{2}$)



$2 - a = 1 \to a = 1$

$y - x = 0 \to y = x$

فاصله بین خطوط موازی $\Rightarrow \frac{|x-(x+1)|}{\sqrt{(-1)^2+1^2}} = \frac{1}{\sqrt{2}} \to AD$

$5^2 = \left(\frac{1}{\sqrt{2}}\right)^2 + (AB)^2$

$AB^2 = \frac{49}{2} \Rightarrow AB = \frac{7}{\sqrt{2}}$

$S \Rightarrow \frac{1}{\sqrt{2}} \times \frac{7}{\sqrt{2}} = \frac{7}{2}$

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$d = \frac{|4-1|}{\sqrt{1^2+(-3)^2}} = \frac{3}{\sqrt{10}}$ طول ضلع (ارتفاع)

$x = 1 + 3y \quad (y_2, 3y_2+1), (y_1, 3y_1+1)$

ربع اول $\Rightarrow y>0, x>0 \quad y = \frac{x-1}{3} \quad y=0 \Rightarrow x=1 \quad x=0 \;\; y = -\frac{1}{3}$ غ ق ق

$BC = \sqrt{(x_2-x_1)^2+(y_2-y_1)^2} \Rightarrow BC^2 = (x_C-1)^2 + (y_C - \frac{1}{3})^2 \Rightarrow BC = \dots (x_C - 1)$

$S = \frac{1}{2} \times 2\left(\frac{\sqrt{10}}{3}\right)(x_C-1) \times \frac{3}{\sqrt{10}} \Rightarrow \frac{1}{2}(x_C - 1) \Longrightarrow \frac{3}{2}$

$\left(\frac{7}{2}, \frac{1}{2}\right) \Rightarrow (4, 1)$

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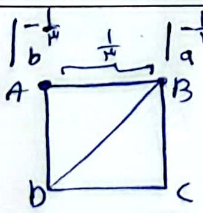

$L_\Delta \Rightarrow y - y_1 = \sqrt{3}(x - x_1)$

$m_{AB} \Rightarrow \sqrt{3} = \frac{a-b}{-\frac{1\times 2}{3\times 2} + \frac{1 \times 2}{3 \times 2}} \Rightarrow \sqrt{3} = \frac{a-b}{-\frac{1}{6}}$

$a - b = -\frac{\sqrt{3}}{6}$

$AB = \sqrt{(a-b)^2 + (-\frac{1}{6})^2} \Rightarrow$

$AB = \sqrt{\frac{3}{36} + \frac{1}{36}} = \frac{2}{6} = \frac{1}{3}$

$BD = \frac{\sqrt{2}}{3}$

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$O(0,0) \quad P(-3,-4) \Rightarrow OP = \sqrt{(-3)^2+(-4)^2} = 5 = r$

$x^2 + y^2 = 25 \quad m = \frac{0+4}{0+3} = \frac{4}{3} \Rightarrow$ خط مماس $\Rightarrow -\frac{3}{4} = m_L$

$y + 4 = -\frac{3}{4}(x+3) \Rightarrow y + 4 = -\frac{3}{4}x - \frac{9}{4} - \frac{16}{4} \Rightarrow y = -\frac{3}{4}x - \frac{25}{4}$

$5 = \frac{|b|}{\sqrt{1+(\frac{4}{3})^2}} \Rightarrow b = \frac{25}{3} \to M \Rightarrow \frac{4}{3}x + \frac{25}{3} = y$ نقطه تلاقی دو خط $\Rightarrow \frac{4}{3}x + \frac{25}{3} = -\frac{3}{4}x - \frac{25}{4}$

$100 + 16x = -9x - 75 \to x = -7 \to y = -1$

مساحت: ۷