

نام و نام خانوادگی پاسنامه تشریحی تکلیف شماره ۱۷۱ کلاس یازدهم

$$y = -\frac{1}{r}x + b \xrightarrow{x=4} y = -\frac{1}{r}(4) + b = -2 + b \Rightarrow m = -2 + b$$

$$\xrightarrow{x=-2} y = -\frac{1}{r}(-2) + b = 1 + b \Rightarrow k = 1 + b$$

$$\overline{AM} = \sqrt{(4-(-2))^2 + (-2+b-1-b)^2} = \sqrt{36+9} = \sqrt{45}$$

$$\rightarrow S = \sqrt{45} \times \sqrt{45} = 45 \quad \checkmark$$

$$AB \parallel DC \rightarrow m_{AB} = m_{DC} \Rightarrow \frac{-3}{r} = \frac{-3}{r_{x+1}} \Rightarrow r_{x+1} = 4 = x_1 = \frac{3}{r}$$

$$AB \perp BC \rightarrow m_{AB} = -\frac{r}{4} \Rightarrow m_{BC} = \frac{4}{r} \rightarrow BC: y-1 = \frac{4}{r}(x-3) \rightarrow y = \frac{4}{r}x - 3$$

$$BC \text{ نقطه } C \text{ می گذرد} \xrightarrow{x=\frac{3}{r}} y = \frac{4}{r}\left(\frac{3}{r}\right) - 3 = -1 \Rightarrow C\left(\frac{3}{r}, -1\right)$$

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

$$\overline{BC} = \sqrt{\frac{9}{r^2} + 4} = \frac{5}{r} = 2, 5$$

$$\text{مساحت: } 2 \times (5+2,5) = 2 \times 7,5 = 15 \quad \checkmark$$

$$\sin \theta = \tan 90^\circ = \sqrt{3}$$

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

$$\rightarrow m_{\text{مماس}} = \frac{\sqrt{\Delta}}{|a|} = \frac{\sqrt{4+12}}{\sqrt{3}} = \frac{4}{\sqrt{3}} = \frac{4\sqrt{3}}{3} \quad \checkmark$$

$$m_{BC} = \frac{1}{r} = 2$$

$$y_{BC} = r_{x1} - 3 \rightarrow y - 2x + 3 = 0$$

$$A \text{ و } B \text{ از } BC: \frac{|9-2+3|}{\sqrt{1+4}} = \frac{1}{\sqrt{5}} = 2\sqrt{5} \quad \checkmark$$

$$\begin{cases} AB: 3y + 2x = 17 \xrightarrow{\times 2} 2y + 4x = 34 \\ BC: 2y - 4x = -19 \end{cases} \Rightarrow 11x = 33$$

$$x_1 = 3, y_1 = 1 \Rightarrow B(3, 1)$$

$$B \text{ فاصله } AC: \frac{|14-9-17|}{\sqrt{19+9}} = \frac{-22}{5} = 4, 4 \quad \checkmark$$

$$m: \frac{\Delta y}{\Delta x} = \frac{-4}{\frac{10}{3}} = -1 \rightarrow y = -1x - 4$$

چون اضلاع مربع برابرند فاصله فقط A از محورهای x, y برابر است.

$$\Rightarrow \alpha = -1\alpha - 4$$

$$2\alpha = -4$$

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

$$\Rightarrow A(-2, -2)$$

$$\Rightarrow \text{قطر} = \sqrt{\left(\frac{2}{3}\right)^2 + \left(\frac{2}{3}\right)^2} = \sqrt{\frac{8}{9}} = \frac{2\sqrt{2}}{3}$$

$$y = ax + 1$$

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

$$\left\{ \begin{array}{l} \text{موازی اند} \\ m_1 = m_2 \end{array} \right\} \alpha = \frac{1}{a} \Rightarrow a = \pm 1$$

نقطه (1, 2) باید در خط از شرط صد کند.

$$y_1 = a + 1$$

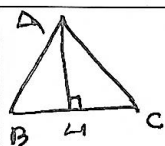
$$y_2 = a$$

$$\text{فاصله فقط} = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$



$$\Rightarrow \sqrt{2} - \left(\frac{\sqrt{2}}{2}\right)^2 = \sqrt{\frac{4}{2}} = \frac{2}{\sqrt{2}} = \frac{\sqrt{2}}{1}$$

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



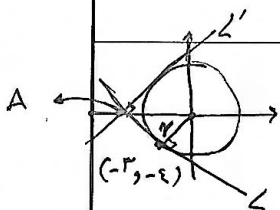
$$\Delta H: \text{فاصله } A \text{ از } BC = \frac{|4-1|}{\sqrt{1+9}} = \frac{3}{\sqrt{10}}$$

فرض می کنیم طول ضلع مربع برابر با 1 است.

$$\Rightarrow \frac{3}{\sqrt{10}} \times \frac{\sqrt{10}}{1} \times \frac{\sqrt{10}}{1} = \frac{9 \times 1}{1 \times 1} = 9$$

$$m: \frac{\Delta y}{\Delta x} = \frac{a-b}{-\frac{1}{4}} = \sqrt{3} \Rightarrow a-b = \frac{\sqrt{3}}{4}$$

$$\text{ضلع} = \sqrt{\left(\frac{1}{4}\right)^2 + \left(\frac{\sqrt{3}}{4}\right)^2} = \frac{1}{2} \Rightarrow \text{قطر} = \frac{\sqrt{2}}{2}$$



$$\text{شیب شعاع } r: \frac{-4}{-2} = \frac{4}{2}$$

$$\text{خط } L \rightarrow m_L = \frac{-3}{4}$$

$$\text{طول شعاع} = \sqrt{16+9} = 5$$

$$\rightarrow \text{خط } L: y = \frac{-3}{4}x - \frac{25}{4}$$

$$\text{خط } L' \rightarrow m_{L'} = \frac{4}{3}$$

$$\text{خط } L': y = \frac{4}{3}x - b$$

$$\frac{|-b|}{\sqrt{\frac{16}{9}}} = 5 \rightarrow |b| = \frac{25}{3}$$

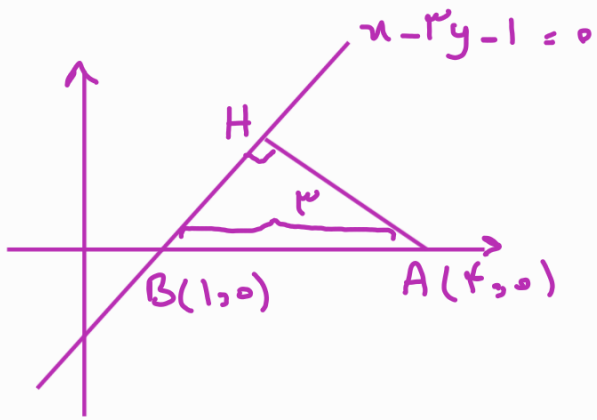
$$\rightarrow \left\{ \begin{array}{l} L: y = \frac{-3}{4}x - \frac{25}{4} \\ L': y = \frac{4}{3}x + \frac{25}{3} \end{array} \right\} \text{ تقاطع } \Rightarrow A(-5, -1)$$

$$\Rightarrow (-5) \times (-1) = 5$$

$$\frac{25}{b} > 0 \rightarrow b = \frac{25}{3}$$

۸ ابتدا شکل سوال را رسم کرده و طول ضلع

AH را می یابیم



$$|AH| = \frac{|4 - 0 - 1|}{\sqrt{9 + 1}} = \frac{3}{\sqrt{10}}$$

$$\frac{9}{10} (AH)^2 + (BH)^2 = (AB)^2 \rightarrow BH = \frac{9}{\sqrt{10}}$$

$$S_{\Delta} = \frac{9}{\sqrt{10}} \times \frac{3}{\sqrt{10}} \times \frac{1}{2} = \frac{27}{20} = 1,35$$