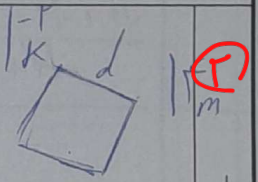


14,75

نام و نام خانوادگی: ... کارن رضایی ... پاسنامه تشریحی تکلیف شماره 17 کلاس 14

$$\frac{m-k}{k+r} = a_2 = -\frac{1}{r} \Rightarrow \frac{m-k}{k+r} = -\frac{1}{r} \rightarrow |m-k|_2 = 3$$



$$d = \sqrt{(r-r)^2 + (r)^2} = \sqrt{r^2 + 9} = \sqrt{10}$$

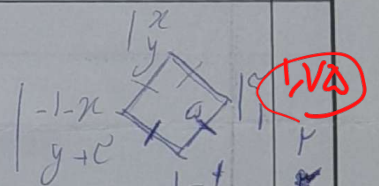
$$d = 5 = \sqrt{10} \cdot r = 10 \checkmark$$

$$\frac{-2m}{m^2-1} = \tan \theta = \sqrt{3} \rightarrow \sqrt{3}m^2 + 2m - \sqrt{3} = 0 \rightarrow m = \frac{-2 \pm \sqrt{16}}{2\sqrt{3}}$$

$$\begin{aligned} \rightarrow \frac{-2 \pm \sqrt{16}}{2\sqrt{3}} &= \frac{-2}{\sqrt{3}} \\ \rightarrow \frac{-2 \pm \sqrt{16}}{2\sqrt{3}} &= \frac{1}{\sqrt{3}} - \left(-\frac{1}{\sqrt{3}}\right) = \frac{1}{\sqrt{3}} + \frac{1}{\sqrt{3}} = \frac{2}{\sqrt{3}} \checkmark \end{aligned}$$

$$r-1 = y+c-y, \quad 3-(-1) = x-(-1-x) \rightarrow$$

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



$$\frac{y+c-y}{x} = \frac{1-x}{y-1} \rightarrow \frac{c}{x} = \frac{1-x}{y-1} \rightarrow 4y-6=12 \rightarrow$$

$$\rightarrow y = 3 \rightarrow P = (2) \sqrt{(3-\frac{1}{2})^2 + (3-1)^2} + \sqrt{1^2 + 1^2} = 2(\frac{5}{2} + 1) = \frac{10}{2} = 5 \checkmark$$

$$BC: \frac{1}{r}x + b = y \rightarrow rx + b = y \xrightarrow{(1,9)} rx - c = y$$

$$\perp BC: -\frac{1}{r}x + b = y \xrightarrow{(1,9)} -\frac{1}{r}x + \frac{19}{r}$$

H محل پایه عمود

$$H: rx - c = -\frac{1}{r}x + \frac{19}{r} \rightarrow rx - y = -x + 19 \rightarrow 5x = 25 \rightarrow x = 5$$

$$rx - c = y \xrightarrow{x=5} y = 4 \rightarrow H = (5, 4)$$

$$d = \sqrt{(5-1)^2 + (4-9)^2} = \sqrt{20} = 2\sqrt{5} \checkmark$$

$$B: \frac{rx-19}{r} = -rx + 19 \rightarrow rx - 19 = -rx + 19 \rightarrow 11x = 38 \rightarrow x = 3, y = 1 \checkmark$$

$$BH: -\frac{1}{r}x + b = y \xrightarrow{(1,9)} -\frac{1}{r}x + 10 = y \rightarrow -\frac{1}{r}x + 10 = y$$

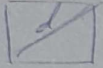
$$H: \frac{3x+19}{r} = \frac{-rx+10}{c} \rightarrow -17x + 9 = 9x + 10 \rightarrow x = \frac{9}{10}$$

$$BH: AC: BH = \frac{|19-9-19|}{\sqrt{14+9}} = \frac{19}{5} = 3,8$$

چون در مربع طولها برابر است و یک رأس روی مبدأ است پس قطر منطبق بر $x=y$ است

$$\frac{4}{-\frac{3}{4}}x - 4 = y \rightarrow -12x - 4 = y \xrightarrow{x=y} -12x - 4 = x \rightarrow 9x = -4 \rightarrow$$

$$\rightarrow x = \frac{-4}{9} = -\frac{4}{9}, y = -\frac{4}{9} \rightarrow d = \sqrt{\left(\frac{4}{9}\right)^2 + \left(\frac{4}{9}\right)^2} = \sqrt{2 \times \left(\frac{4}{9}\right)^2} = \frac{4\sqrt{2}}{9}$$

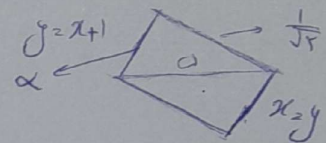


در صورت $a=1$ نقطه داده شده در مستطیل منطبق نمی‌کند $a=1$

$$y=x, y=x+1 \rightarrow \text{فاصله دو نقطه} = d_{(0,0), y=x+1} = \frac{1}{\sqrt{2}}$$

$$\omega^2 = \left(\frac{1}{\sqrt{2}}\right)^2 + \alpha^2 \rightarrow 20 = \frac{1}{2} + \alpha^2 \rightarrow \alpha^2 = 20 - \frac{1}{2} = \frac{40-1}{2} = \frac{39}{2}$$

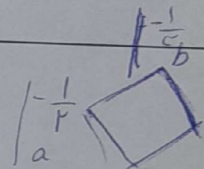
$$\rightarrow \alpha = \frac{\sqrt{39}}{\sqrt{2}} \rightarrow S = \alpha \times \frac{1}{\sqrt{2}} = \frac{\sqrt{39}}{\sqrt{2}} \times \frac{1}{\sqrt{2}} = \frac{\sqrt{39}}{2}$$



$$\frac{b-a}{-\frac{1}{c} + \frac{1}{r}} = \sqrt{3} \rightarrow b-a = \frac{\sqrt{3}}{4}$$

$$\text{ضلع} = \sqrt{\left(\frac{1}{4}\right)^2 + \left(\frac{\sqrt{3}}{4}\right)^2} = \sqrt{\frac{1}{16} + \frac{3}{16}} = \sqrt{\frac{4}{16}} = \frac{1}{2}$$

$$S = \text{ضلع}^2 = \frac{1^2}{2} \rightarrow \text{قطر} = \sqrt{2} \times \text{ضلع} = \frac{1}{2} \times \sqrt{2} = \frac{\sqrt{2}}{2}$$



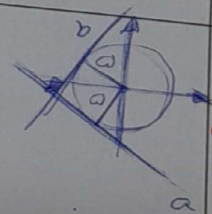
جواب صفحه بعد ...

$$\frac{c}{c}x = y \text{ و } B \text{ فاصله قطر } = \left\{ \begin{array}{l} \text{فاصله } (0,0) \text{ تا } B \\ \text{فاصله } (0,0) \text{ تا } C \end{array} \right\} \rightarrow \frac{3b}{a} = a$$

$$b: \frac{c}{c}x + b = y \rightarrow cx + cb - cy = 0$$

$$b: \frac{c}{c}x + \frac{10}{c} = y \quad a: -\frac{c}{c}x + b = y \xrightarrow{(-2) \times a} \frac{-2}{c}x + \frac{20}{c} = y$$

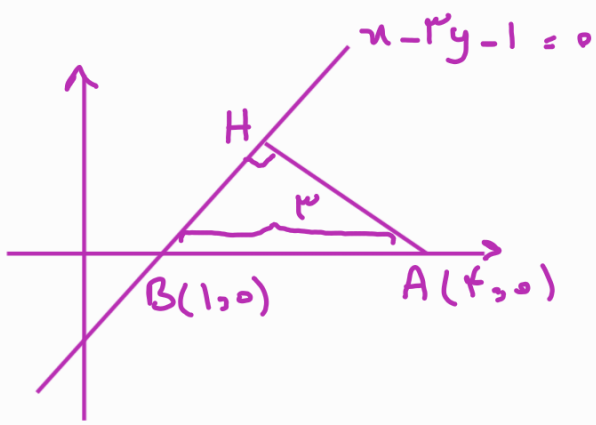
$$\frac{2x+20}{c} = \frac{-cx+10}{c} \rightarrow 2x+20 = -cx+10 \rightarrow 20x = -10 \rightarrow x = -\frac{1}{2}$$



$$\text{فاصله} = (-\sqrt{2}, -1) \rightarrow (-\sqrt{2})(-1) = \sqrt{2}$$

۱) ابتدا شکل سوال را رسم کرده و طول ضلع

AH را می‌توانیم



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

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

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