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لازمه

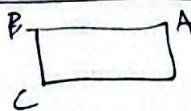
آزمون

$$-\frac{1}{f}x \rightarrow (f, -f+x) (-f, 1+x) \quad m-k=2$$

$$\text{فاصله} = \sqrt{\Delta y^2 + \Delta x^2} \Rightarrow \sqrt{9 + (f - (-f))^2} = \sqrt{9 + 4f^2} = \sqrt{4f^2} \times \sqrt{4} = 4f \quad \checkmark$$

1

$$AB \xrightarrow{m} \frac{\Delta y}{\Delta x} = \frac{f}{-f}$$



2

$$\frac{f}{-1-fx} = -\frac{f}{f} \rightarrow -1-fx = -f \rightarrow -fx = -f \rightarrow x = \frac{f}{f}$$

$$\left(\frac{f}{f}, y\right) \xrightarrow{m=\frac{f}{f}} \frac{y-1}{-\frac{f}{f}} = \frac{f}{f} \rightarrow y-1 = -f \rightarrow y = -1$$

$$\sqrt{17+9} = 4 \quad \sqrt{\frac{9}{f} + f} \rightarrow \frac{4}{f}$$

$$10+4 = 14 \quad \checkmark$$

$$\tan \theta \rightarrow \frac{\Delta y}{\Delta x} = \sqrt{f}$$

$$\frac{-fm}{m^2-1} = \sqrt{f} \rightarrow \sqrt{f}m^2 - \sqrt{f} = -fm$$

3

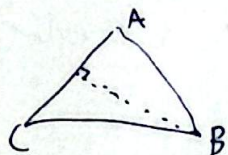
$$\sqrt{f}m^2 + fm - \sqrt{f} \quad \frac{-f \pm f}{2\sqrt{f}} \rightarrow \frac{1}{\sqrt{f}} \rightarrow \frac{f}{\sqrt{f}}$$

$$\Delta m \leq \frac{1}{\sqrt{f}} - \frac{f}{\sqrt{f}} = \frac{1-f}{\sqrt{f}} = \frac{f}{\sqrt{f}} \times \frac{\sqrt{f}}{\sqrt{f}} = \frac{f\sqrt{f}}{f} \quad \checkmark$$

$$m_{BC} \rightarrow \frac{\Delta y}{\Delta x} = \frac{11-f}{\sqrt{f}} = \frac{1}{f} = 2 \rightarrow -\frac{1}{f}x \quad (1, 9) \rightarrow -\frac{1}{f}x + \frac{19}{f}$$

4

$$2x-f = -\frac{1}{f}x + \frac{19}{f} \rightarrow \frac{4}{f}x = \frac{19}{f} \rightarrow x = 4 \quad (4, 1) \quad (1, 9) \quad \sqrt{\Delta y^2 + \Delta x^2} = \sqrt{f+17} = 2\sqrt{4} \quad \checkmark$$



$$AC = f \quad y = fx + 17 \rightarrow y = \frac{f}{f}x + \frac{17}{f}$$

$$\frac{f}{f} + \frac{f}{f} = \frac{10}{f}$$

5

$$\frac{11}{f}x = \frac{17}{f} \rightarrow x = 2 \quad (2, 1)$$

$$-\frac{f}{f}x \quad (2, 1) \rightarrow -\frac{f}{f}x + 4 = \frac{f}{f}x + \frac{17}{f}$$

$$\frac{17}{11}x = \frac{f}{f} \rightarrow x = \frac{f}{17}, \frac{f}{f} = \frac{9}{17}$$

$$\left(\frac{9}{17}, \frac{11}{17}\right) \quad \frac{17}{17} \times \frac{17}{17} = \frac{17}{17}$$

$$(2, 1) \quad \sqrt{\left(\frac{17}{17}\right)^2 + \left(\frac{11}{17}\right)^2}$$

$$\frac{11}{17} = \frac{f}{f} \quad \checkmark$$

$$\frac{x}{-\frac{f}{f}} = \frac{y}{-4} \Rightarrow \frac{y}{4} = \frac{-fx}{f} \rightarrow y = -fx - 4$$

6

$$a = -fx - 4 \rightarrow 9a = -4 \rightarrow a = \frac{-4}{9} = -\frac{4}{9}$$

$$\frac{f\sqrt{2}}{f} = \frac{f}{f} \sqrt{2}x \frac{\sqrt{2}}{\sqrt{2}} = \left(\frac{f}{f\sqrt{2}}\right) \quad \checkmark$$

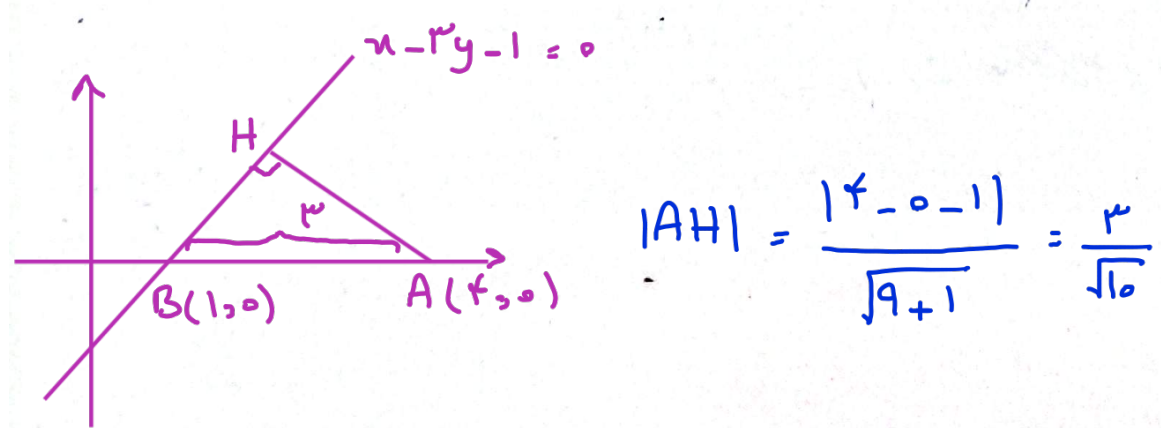
$y = ax + 1$
 $a = \frac{1}{a} \Rightarrow a^2 = 1 \rightarrow +1$ ~~$y = x + 1$~~ $y = x + 1$ ✓ $(1, 2)$
 $y = \frac{1}{a}x + 1 - \frac{1}{a}$ $\rightarrow -1$ ~~$y = x$~~ $y = x$ ✓ $(1, 1)$
 فاصلہ $2a - 1 = \sqrt{2}$ $\sqrt{2}$ ~~$\sqrt{2}$~~

$\Delta y^2 + \Delta x^2 = \sqrt{\frac{1}{4} + \frac{9}{4}} = \frac{5}{2}$ $\frac{5}{2}$ $\frac{5}{2}$
 $\sqrt{(\frac{1}{2})^2 + (\frac{3}{2})^2} = \frac{1}{2} \sqrt{10} = \frac{\sqrt{10}}{2}$ $\frac{\sqrt{10}}{2}$

$x - 2y - 1$ $(4, 0)$ $|4 - 0 - 1| = \frac{3}{\sqrt{10}} = \frac{3\sqrt{10}}{10}$ ✓ $(1) - 1$
 $2y = x - 1$ $(0, -\frac{1}{2})$ ✓ $(1, 0)$ ✓
 $\frac{3}{\sqrt{10}} \times \frac{3}{\sqrt{10}} \times \frac{1}{2} = \frac{9}{20}$ ~~$\frac{9}{20}$~~

$\frac{\Delta y}{\Delta x} = \frac{4}{3}x \rightarrow -\frac{3}{4}x$ $\rightarrow$ خط L
 $\frac{4}{3}x + 1 = -\frac{3}{4}x \rightarrow \frac{4}{3}x + \frac{3}{4}x = -1 \rightarrow \frac{16}{12}x + \frac{9}{12}x = -1 \rightarrow \frac{25}{12}x = -1 \rightarrow x = -\frac{12}{25}$
 $y = \frac{28}{100} \rightarrow -\frac{2768}{2500} = -\frac{4912}{625}$ $11, \dots$

شماره سوال: سوال ۸ را پایین سوال ۹ حل کرو



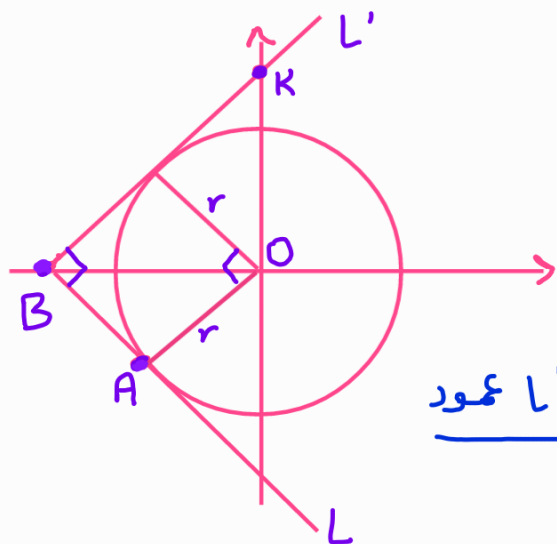
$\frac{9}{10} (AH)^2 + (BH)^2 = (AB)^2 \rightarrow BH = \frac{9}{\sqrt{10}}$

$S_{\Delta} = \frac{9}{\sqrt{10}} \times \frac{3}{\sqrt{10}} \times \frac{1}{2} = \frac{27}{20} = 1.35$

(۷)

فاصله نقطه (۱، ۲) از خط $y - x = 0$ = $\frac{1}{\sqrt{2}}$ = $\frac{1}{\sqrt{2}}$ $\Rightarrow (x_0)^2 + \frac{1}{2} = 25 \rightarrow x_0 = \frac{7}{\sqrt{2}}$

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



$m_{OA} = \frac{4}{3} \xrightarrow{\text{عمود بر } L} m_L = -\frac{3}{4}$ (۱۰)

$$L: y + 4 = -\frac{3}{4}(x + 3) \rightarrow y = -\frac{3}{4}x - \frac{25}{4}$$

$\xrightarrow{\text{عمود بر } L} m_{L'} = \frac{4}{3} \rightarrow L': y - \frac{4}{3}x - K = 0$

$OL' = OA = \sqrt{9 + 16} = 5$ شعاع

$$OL' = \frac{|1 - K|}{\sqrt{1 + \frac{16}{9}}} = 5 \rightarrow K = \frac{25}{3} \rightarrow L': y = \frac{4}{3}x + \frac{25}{3}$$

مختصات B محل تقاطع L و L' $\Rightarrow (-7, -1) \xrightarrow{\text{حاصل ضرب}} \boxed{7}$