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آنها کرسی یا زده در دفتر B تکلیف 15

SUBJECT:

Year:

Month:

Day:

$$A(1, -5) \quad B(2, 1) \quad m_{AB} = \frac{1 + 5}{2 - 1} = -6 \quad (1)$$

$$m_{AB}(x - x_A) = y - y_A \Rightarrow -6(x - 1) = y + 5$$

$$\Rightarrow -6x + 6 = y + 5 \quad x = \frac{x_A + x_B}{2} = \frac{1 + 2}{2} = 1.5 \quad \frac{y_A + y_B}{2} = \frac{-5 + 1}{2} = -2$$

$$m = \frac{1}{-6} (x - 1.5) = y + 2 \Rightarrow \frac{x}{-6} + \frac{1.5}{6} = y + 2 = x - 1.5 = -6$$

$$d_{BC} = \sqrt{(-1 + 0)^2 + (2 - 1)^2} = \sqrt{1 + 1} = \sqrt{2}$$

$$m_{BC} = \frac{1 - 2}{0 - 1} = \frac{-1}{-1} = 1 \quad m_{AH} = \frac{1}{2}$$

$$\frac{1}{2}(x - 2) = y - 1 \rightarrow \frac{x}{2} - y = \frac{1}{2}$$

$$\Rightarrow x - 2y = 1$$

$$\begin{cases} x - 2y = 1 \\ -x + y = 0 \end{cases}$$

$$\begin{cases} 12x - 19y = 20 \\ -12x - 9y = 10 \end{cases}$$

$$BC: A \text{ فاصله} = \frac{|1 + 2 \cdot \frac{1}{2}|}{\sqrt{1 + (\frac{1}{2})^2}} = \frac{2}{\sqrt{1.25}} = \frac{4}{\sqrt{5}}$$

$$-20y = 30 \quad y = -\frac{3}{2} \quad x = \frac{1}{2}$$

$$d_{AH} = \sqrt{(2 + \frac{1}{2})^2 + (1 + \frac{3}{2})^2}$$

$$= \sqrt{\frac{25}{4} + \frac{25}{4}} = \frac{5}{2} = 2.5$$

$$d_{BC} - d_{AH} = 2 - 1 = 1$$

$$2 - 1 = 1$$

$$x - 2y = 1$$

$$x - y = 2$$

$$\frac{-1}{-2} = \frac{a}{1} = \frac{1}{2} \Rightarrow a = 2$$

$$x - 2y = 1$$

$$x - y = 2 \Rightarrow x - 2y = 1$$

$$|C + C'| = \frac{|1 - 2|}{\sqrt{1 + 1}} = \frac{1}{\sqrt{2}} = \frac{1 \cdot \sqrt{2}}{\sqrt{2} \cdot \sqrt{2}} = \frac{\sqrt{2}}{2}$$

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

$$\pi r^2 = \pi \times \frac{1 \times 2}{2} \Rightarrow \frac{1}{2} \pi$$

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Year: Month: Day:

$$1 \quad \textcircled{5} \quad A(r, r) \quad B(r, 1) \quad C(-1, -r)$$

$$2 \quad M\left(\frac{r+r}{2} = r, \frac{r+1}{2} = r\right) \quad (r, r)$$

$$3 \quad m_{AB} = \frac{r-1}{r-r} = \frac{-r}{r} = -1 \quad m_{CH} = +1 \quad x-r$$

$$4 \quad y = -x + a \quad \begin{cases} -x - y = -a \\ x - y = r \\ -2a = -r \end{cases} \quad \text{CH: } y = x - r \quad (1)$$

$$5 \quad \left[-2a = -r \quad x = \frac{r}{2} \quad y = \frac{r}{2} \right]$$

$$6 \quad \sqrt{\left(r - \frac{r}{2}\right)^2 + \left(r - \frac{r}{2}\right)^2} = \sqrt{\left(\frac{r}{2}\right)^2 + \left(\frac{r}{2}\right)^2} = \frac{r\sqrt{2}}{2}$$

$$7 \quad \text{MH: } \frac{|r - \frac{r}{2}|}{\frac{\sqrt{2}}{2}} = \frac{a - m}{rm - r}$$

$$8 \quad (rm - r)(m + 1) = (a - m)(rm - r)$$

$$9 \quad rm^2 + rm - rm - r = 1 \cdot m - r \Rightarrow -rm^2 + rm = 1 \cdot m - r$$

$$10 \quad \Rightarrow rm^2 - 1 \cdot m + 1 \cdot r = 0 \quad \Delta = (-1)^2 - 4(r)(1) \rightarrow 1 - 4r < 0$$

$$11 \quad \text{مضروب ناقص صفر}$$

$$12 \quad \text{مضروب ناقص صفر}$$

$$13 \quad \begin{cases} ry = -x + r \\ y = -x + r \end{cases} \Rightarrow B(-1, 1)$$

$$14 \quad \begin{cases} ry = -x + r \\ y = r - x \end{cases} \Rightarrow A(1, 1) \quad \begin{cases} y = r - x \\ y = r - x \end{cases} \Rightarrow C\left(\frac{a}{r}, \frac{v}{r}\right)$$

$$15 \quad m = \left(\frac{\frac{a}{r} + \frac{1 \cdot a}{r}}{2}, \frac{\frac{v}{r} + \frac{1 \cdot v}{r}}{2} \right) = m\left(\frac{1 \cdot a}{r}, \frac{1 \cdot v}{r}\right)$$

$$16 \quad AM = \sqrt{\left(\frac{v}{r}\right)^2 + \left(\frac{1}{r}\right)^2} = \frac{\sqrt{a^2}}{r} \quad A \text{ نقطہ } = \frac{|1+1-r|}{\sqrt{2}}$$

$$17 \quad m_{Am} = -1 \quad x+y=r \quad \frac{\frac{\sqrt{a^2}}{r}}{\sqrt{2}} = \frac{a\sqrt{2}}{r\sqrt{2}} = \frac{a}{r}$$

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①

$$\frac{x}{a} + \frac{y}{b} = 1$$

$$m = \frac{-b}{a} = -\frac{1}{r} \rightarrow \frac{b}{a} = \frac{1}{r}$$

$$xab, bx + ay = ab$$

$$b = \frac{a}{r}$$

$$d = \frac{|ab|}{\sqrt{b^2 + a^2}} = \frac{\sqrt{r_0}}{\sqrt{1 + r_0^2}}$$

$$\frac{\left|\frac{a}{r}\right|}{\sqrt{a^2 + \frac{a^2}{r^2}}} = \frac{a\sqrt{a}}{a} = \sqrt{r_0}$$

$$a = \frac{\sqrt{r_0}}{\sqrt{1 + r_0^2}} \Rightarrow a = 1, b = 1$$

$$A = (a, 0) = (1, 0) \quad B = (0, b) = (0, 1)$$

$$\sqrt{(1-0)^2 + (0-1)^2} = \sqrt{1+1} = \sqrt{2} = a\sqrt{2}$$

②

$$\begin{cases} my - rx = r \Rightarrow y = \frac{rx}{m} + r \\ y = x + r - mx \end{cases}$$

$$\frac{rx}{m} + r = -mx + x + r$$

$$\Rightarrow -m^2x + mx + r = rx + r$$

$$0 = \frac{rx}{m} + r \Rightarrow x_A = -\frac{m}{r}$$

$$C = (0, r)$$

$$\rightarrow 0 = (1-m)x + r \Rightarrow x_B = \frac{r}{m-1}$$

$$S = |x_B - x_A| = \left| \frac{r}{m-1} + \frac{m}{r} \right| = \frac{a}{r}$$

$$① \quad -r + m - m^2 = \frac{a}{r} \Rightarrow m^2 - m + r = 0 \quad m = \frac{1 \pm \sqrt{1-4r}}{2}$$

$$② \quad -m^2 + m - r = -\frac{a}{r} \Rightarrow m^2 - m + r = 0$$

$$m^2 - m - 1 = 0 \Rightarrow x = \frac{1 \pm \sqrt{5}}{2}$$

$$r_A \left(\frac{1 + \sqrt{5}}{2} \right) \left(\frac{1 - \sqrt{5}}{2} \right) = -r$$

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$$(9) \quad y - rx = -r \quad n(r, -r)$$

$$\hookrightarrow m = r \quad \frac{-1}{r} (x - r) = y + r$$

$$\begin{cases} x + ry = -r \\ -rx + y = -r \end{cases} \quad \frac{-x}{r} + 1 - r = y \quad \frac{x}{r} + y = -1$$

$$x = r \quad r = \frac{r}{\omega}, \quad y = \frac{-r}{\omega}$$

$$\frac{\frac{r}{\omega} + x}{r} = r \quad \frac{\frac{-r}{\omega} + y}{r} = -r \Rightarrow y = \frac{-1r}{\omega}$$

$$\hookrightarrow x = \frac{1r}{\omega}$$

$$m = r \rightarrow r(x - \frac{1r}{\omega}) = y + \frac{1r}{\omega} \Rightarrow y = rx - 2$$

$$(10) \quad y = x + a \quad A(1, r)$$

$$y - x = a \quad -1(x - 1) = y - r$$

$$\hookrightarrow m = 1 \quad y = -x + r$$

$$\begin{cases} y = x + a \\ y = -x + r \end{cases} \quad \frac{1+a}{r} = -1 \quad \frac{r+b}{r} = r$$

$$rx = -r \quad a = -r, \quad y = r \quad r(b - a) = r(r) - (-r) = 1a$$