

Amojozib

Unsejozib

IV s. 12 C. 12
①

A | -r
B | r
m

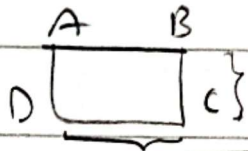
$$m = \frac{-1}{r} = \frac{\Delta y}{\Delta x} = \frac{k-m}{-1} = \frac{-1}{r} \rightarrow k-m=r$$

$$AB = \sqrt{\Delta y^2 + \Delta x^2} = \sqrt{r^2 + 4r} = \sqrt{r^2 + 9} = \sqrt{20}$$

$$\sqrt{r^2} \times \sqrt{r^2} = r^2 \quad (\text{P. 12. 12})$$

A | -r B | r C | y D | -1-m
y+r

②



$$rx + \frac{r}{r} = \frac{r}{r} \rightarrow 1 + r = 1 \quad \text{✓}$$

$$AB = \sqrt{(-1)^2 + (1-r)^2} = \sqrt{r^2 + 2} = \frac{r}{r} *$$

$$nA + nC = nB + nD$$

$$-1 + r = r - 1 - m \rightarrow r - 1 - m = -1 \rightarrow r - m = 0 \rightarrow m = r$$

$$m_{AB} = \frac{-r}{2} \rightarrow m_{BC} = \frac{r}{r}$$

$$m_{BC} = \frac{r}{r} = \frac{y-1}{\frac{-r}{r}} = \frac{ry-r}{-r} = \frac{r}{r}$$

$$4y - 4 = -1r \rightarrow 4y = -4 \rightarrow y = -1$$

$$B | r \quad C | \frac{r}{-1} \rightarrow BC = \sqrt{r^2 + \frac{r^2}{1}} = \sqrt{2r^2} = \frac{r}{r} *$$

$$r m + (m^2 - 1)y = r$$

(1)

$$\tan \theta = \sqrt{r} \quad y = \frac{r - r m^2}{m^2 - 1} = \frac{-r m^2}{m^2 - 1} + \frac{r}{m^2 - 1}$$

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

$$\sqrt{r} m^2 + r m - \sqrt{r} = 0$$

$$m^2 + r m - r = 0$$

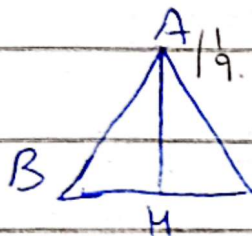
$$\left(\frac{m+r}{\sqrt{r}} \right) \left(\frac{m-1}{\sqrt{r}} \right) = 0$$

$$m = \frac{-r}{\sqrt{r}} \quad m = \frac{1}{\sqrt{r}}$$

$$m \text{ values} = \frac{1}{\sqrt{r}} + \frac{r}{\sqrt{r}} = \frac{r}{\sqrt{r}} = \boxed{\frac{r\sqrt{r}}{r}}$$

$$A \mid \frac{1}{q} \quad B \mid \frac{r}{r} \quad C \mid \frac{v}{11}$$

(2)



$$BC \rightarrow y - 11 = r(m - v)$$

$$BC \text{ slope} = \frac{1}{r} = r$$

$$y = r m - 12 + 11 \Rightarrow y = r m - r$$

$$AM \text{ slope} = \frac{-1}{r}$$

$$A \mid \frac{1}{q}, y = r m - r \rightarrow \frac{|y - r + r|}{\sqrt{1 + r^2}} = \frac{|q - r + r|}{\sqrt{8}} = \frac{10}{\sqrt{8}}$$

$$= \frac{10\sqrt{8}}{8} = \boxed{2\sqrt{5}}$$

$$AB: y + 4 = V$$

$$AC: 5y - 3x = 14$$

$$BC: 2y - 4x = -19$$

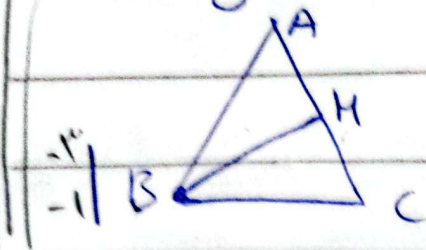
$$y + 4 = V \rightarrow y = 1$$

$$y + 4 = V \rightarrow 2y + 8 = 14$$

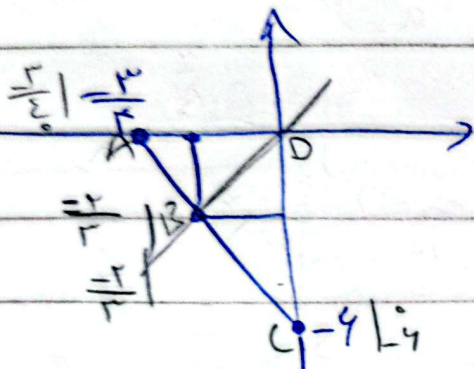
$$2y - 4x = -19$$

$$-11x = -13 \rightarrow x = \frac{13}{11}$$

(a)



$$AC: \text{distance} = \frac{|5y - 3x - 14|}{\sqrt{5^2 + 3^2}} = \frac{|5 - 9 - 14|}{\sqrt{34}} = \frac{18}{\sqrt{34}} = \frac{9\sqrt{34}}{17}$$



(g)

$$m_{AC} = \frac{-4}{\frac{4}{-1}} = \frac{-4}{-4} = 1$$

$$AC: y = -x - 4$$

$$BD: y = x$$

$$-x - 4 = x$$

$$-2x = 4$$

$$x = \frac{-4}{-2} = 2$$

$$y = 2$$

$$a = \text{distance} = \frac{4}{\sqrt{2}} = \frac{4\sqrt{2}}{2} = 2\sqrt{2}$$

(✓)

$$A \quad y - an = 1 \quad B \quad ||_r$$

$$D \quad ay - n = a - 1$$

مستقيمات

$$\begin{cases} y = an + 1 \\ ay = n + a - 1 \rightarrow y = \frac{n + a - 1}{a} = \frac{n}{a} + 1 - \frac{1}{a} \end{cases}$$

$$a = \frac{1}{a} \Rightarrow a^2 = 1 \rightarrow a = \pm 1$$

||_r

$$\begin{cases} r - a = 1 \rightarrow a = 1 \quad \text{صح} \\ ra - 1 = a - 1 \rightarrow a = 0 \quad \text{صح} \end{cases}$$

$$\begin{cases} y = n + 1 \rightarrow y - n = 1 \\ y = n \rightarrow y - n = 0 \end{cases}$$

بجواب

$$= \frac{|1 - 0|}{\sqrt{r}} = \frac{1}{\sqrt{r}} = \frac{\sqrt{r}}{r} \quad *$$

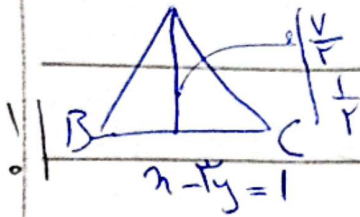
$$\sqrt{\left(\frac{\sqrt{r}}{r}\right)^2 + (CD)^2} = r$$

$$\frac{r}{r} + (CD)^2 = r^2$$

$$(CD)^2 = \frac{r^2 - 1}{r} \rightarrow CD = \frac{\sqrt{r^2 - 1}}{\sqrt{r}} = \frac{\sqrt{r-1}}{\sqrt{r}} \quad *$$

المساحة = $\frac{\sqrt{r-1}}{\sqrt{r}} \times \frac{\sqrt{r}}{r} = \frac{\sqrt{r-1}}{r}$ جواب

A/K



$$r_y = r - 1 \rightarrow y = \frac{r}{r} + \frac{1}{r}$$

$$\text{مساحة } A_{\text{مربع}} = \frac{|-ry + x - 1|}{\sqrt{r^2 + 1}} = \frac{|r-1|}{\sqrt{10}} = \frac{r}{\sqrt{10}} = \frac{r\sqrt{10}}{10}$$

$$m_{AC} = -r \quad y - 0 = -r(x - 1)$$

$$y = -rx + r$$

$$rx - ry = r$$

$$y + rx = r$$

$$-10y = -9 \rightarrow y = \frac{9}{10}$$

$$-rx = \frac{9}{10} - r \Rightarrow rx = \frac{11}{10}$$

$$x = \frac{11}{10r}$$

$$C \left| \begin{array}{c} \frac{11}{10r} \\ \frac{9}{10} \\ 1 \end{array} \right|$$

$$\text{مساحة المثلث} = \frac{1}{r} \left| \begin{array}{ccc} \frac{11}{10r} & \frac{9}{10} & 1 \\ r & 0 & 1 \\ 1 & 0 & 1 \end{array} \right| =$$

$$\frac{1}{r} \left| \begin{array}{ccc} \frac{9}{10} & \frac{11}{10} & 1 \\ 1 & 0 & 1 \end{array} \right| = \frac{1}{r} \times \frac{r}{10} = \frac{r}{10}$$



$$AB : y = \frac{5}{3}x + \frac{10}{3}$$

$$BC : y + 2 = \frac{3}{2}(x + 3) \rightarrow y = \frac{3}{2}x - \frac{9}{2} - 2$$

$$BC : y = \frac{3}{2}x - \frac{13}{2}$$

$$L \text{ و } L' \text{ موازی } = B \rightarrow \frac{3}{2}x - \frac{13}{2} = \frac{5}{3}x + \frac{10}{3}$$

$$\frac{14+9}{12}x = -\frac{13}{2} - \frac{10}{3}$$

$$\frac{13}{12}x = \frac{-190-100}{12} = \frac{-290}{12}$$

$$x = \frac{-290}{13} = -22.3$$

$$y = \frac{3}{2}x - \frac{13}{2} = \frac{3}{2}(-22.3) - \frac{13}{2} = -33.45 - 6.5 = -40$$

$$B \begin{vmatrix} -22.3 \\ -40 \end{vmatrix}$$

$$\left\{ \begin{array}{l} \text{خط } AB \text{ و } BC \text{ موازی} \\ \text{خط } AB \text{ و } BC \text{ موازی} \end{array} \right. = -22.3x - 1 = 22.3$$

خط موازی