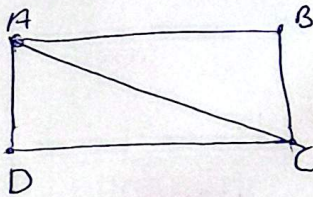


$$AB \rightarrow -\frac{1}{r} = \frac{M-K}{4} \rightarrow -4 = 2M - 2K \rightarrow M - K = -2$$

$$AB = \sqrt{(x_A - x_B)^2 + (y_A - y_B)^2} \rightarrow \sqrt{\left(\frac{E+2}{2}\right)^2 + \left(\frac{M-K}{2}\right)^2} = \sqrt{5}$$

$$(2\sqrt{5}) \rightarrow S = 2\sqrt{5} \times 2\sqrt{5} = 20$$



$$A + C = D + B$$

$$-x - 1 + 3 = x - 1 \rightarrow 2x = 3 \rightarrow x = 1.5$$

$$y + 3 + 1 = y + 3$$

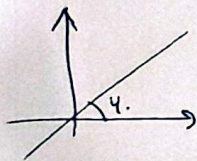
$$AB = CD = \sqrt{(x+1)^2 + (1-x)^2} = 2$$

$$AC^2 = AB^2 + DC^2 \rightarrow \left(\sqrt{(x+1)^2 + (y-1)^2}\right)^2 = 2^2 + (y-1)^2 + 2$$

$$AD = BC = \sqrt{(x-1)^2 + (y-1)^2}$$

$$\sqrt{4+20} \rightarrow \sqrt{24} = 2\sqrt{6}$$

$$2mx + (m^2 - 1)y = 3$$



$$\tan \alpha = \sqrt{3}$$

$$y = \frac{-2m}{m^2 - 1} \quad x = \frac{3}{m^2 - 1}$$

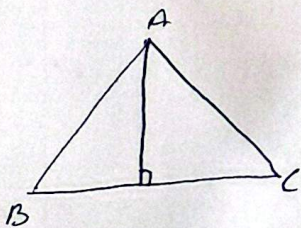
$$\frac{-2m}{m^2 - 1} = \sqrt{3}$$

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

$$\rightarrow m^2 + 2m - 3 \rightarrow (m+3)(m-1) = 0$$

$$\frac{-2}{\sqrt{3}} = \sqrt{3}$$

$$\frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$$



$$BC \rightarrow \frac{11-3}{\sqrt{3}} = \frac{8}{\sqrt{3}} = 2\sqrt{3}$$

$$y = 2m - 3$$

$$y - 2m + 3 = 0$$

$$AH = \frac{|9 - 2 + 3|}{\sqrt{1^2 + 2^2}} = \frac{10}{\sqrt{5}} = 2\sqrt{5}$$

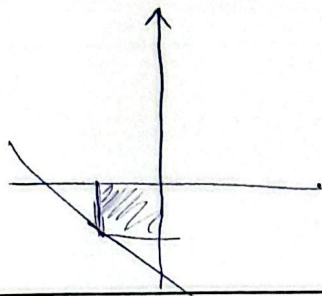
$$\begin{cases} AB = y + 2m = 7 \\ AC = 5y - 2m = 17 \end{cases} \rightarrow \begin{cases} -5y - 2m = -7 \\ 5y - 2m = 17 \end{cases} \rightarrow \begin{cases} m = 1 \\ y = 2 \end{cases}$$

$$\begin{cases} BC = 2y - 4m = -19 \\ AC = 5y - 2m = 17 \end{cases} \rightarrow \begin{cases} 5y - 2m = 17 \\ 5y - 18m = -19 \end{cases} \rightarrow \begin{cases} m = 1 \\ y = 4 \end{cases}$$

$$AC = \frac{m-2}{2-1} = \frac{1}{1} = 1$$

$$y = \frac{3}{2}m + \frac{17}{2} \rightarrow 5y - 2m = 17$$

$$BH = \frac{|5 - 9 - 17|}{\sqrt{1+4}} = \frac{21}{\sqrt{5}} = \frac{21\sqrt{5}}{5}$$



$$\frac{-4}{\frac{r}{\sqrt{r}}} = -1 \quad y = -mx$$

$$m = -1 \cdot \frac{r}{\sqrt{r}} \rightarrow 9m = -4$$

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

$$\frac{\frac{r}{\sqrt{r}}}{r} = \frac{r}{9} \rightarrow \frac{1}{\sqrt{r}} = \frac{r}{9}$$

$$ay - m = a - 1$$

$$y - am = 1$$

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

$$\rightarrow a^2 = 1 \rightarrow a = \pm 1$$

$$a = 1 \rightarrow \begin{cases} y - m = 1 \\ y - m - 1 = 0 \end{cases} \quad (b^2)$$

$$r - 1 - 1 = 0 \quad \checkmark$$

$$\frac{1}{\sqrt{r}} = \frac{1}{\sqrt{1+1}} = \frac{1}{\sqrt{2}}$$

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

$$ab = \frac{r}{\sqrt{r}} \times \frac{1}{\sqrt{r}} = \frac{r}{r} = 1$$

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

$$\left(\frac{1}{\sqrt{r}}\right)^2 + b^2 = r \rightarrow \frac{1}{r} + b^2 = r$$

$$AH = AH \rightarrow \max S$$

$$AH = \frac{|r - (-1)|}{\sqrt{1+1}} = \frac{r}{\sqrt{2}} = AH$$

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

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

$$m - cy = 1 \rightarrow cm + y = a$$

$$r + 1 = a \rightarrow a = r + 1$$

$$\begin{cases} m - cy = 1 \\ cm + y = r + 1 \end{cases} \rightarrow \begin{cases} cm + y = r + 1 \\ cm + y = r + 1 \end{cases}$$

$$y = 1 \rightarrow y = \frac{1}{r} \rightarrow m = \frac{r}{1}$$

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

$$S = \left(\frac{1}{r}\right)^2 = \frac{1}{r^2}$$

$$S = \frac{a-b}{r} = \frac{1}{r}$$

$$a^2 = \frac{r}{r}$$

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

$$OL = \sqrt{\left(\frac{r}{\sqrt{2}}\right)^2 + \left(\frac{1}{\sqrt{2}}\right)^2} = \sqrt{r+1} = d$$

$$OL = \frac{|r - (-1)|}{\sqrt{1+1}} = d \quad |d| = r+1$$

$$\begin{cases} cy - cm = -d \\ cy + c = -ca \end{cases} \rightarrow \begin{cases} cy - cm = -d \\ 14y + 1cm = 14 \end{cases}$$

$$y = \frac{c}{r}m + \frac{r}{r} \rightarrow -d$$

$$cy - cm = -d$$

$$\rightarrow my = -d$$

$$cm \rightarrow y = \frac{r}{r}$$

$$C = b$$