

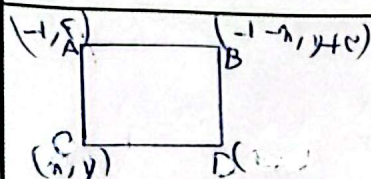
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$$y = -\frac{1}{r}x + b \stackrel{m=-r}{\Rightarrow} -r + b = m$$

$$\stackrel{m=-r}{\Rightarrow} 1 + b = k$$

$$A, B \rightarrow \sqrt{(k-m)^2 + r^2} = \sqrt{(1+b+r-b)^2 + r^2} = \sqrt{r^2} = r$$

$$S_{\square} = (AB)^2 = (\sqrt{r^2})^2 = r^2$$



$$AB \rightarrow -\frac{r}{k} \quad BC, AD \Rightarrow \frac{r}{k}$$

$$-x - m + r \leq x - 1 \rightarrow 2x \leq 3 - m \rightarrow x \leq \frac{3-m}{2}$$

$$DC \rightarrow 1 - y - r = \frac{r-y}{r} \rightarrow \frac{r-y}{r} = \frac{r-y}{r} \rightarrow 1 - y - r = \frac{r-y}{r} \rightarrow 1 - y - r = \frac{r-y}{r}$$

$$AC \rightarrow \sqrt{(1-\frac{r}{k})^2 + (\frac{r}{k})^2} = \sqrt{\frac{r^2}{k^2} + \frac{r^2}{k^2}} = \sqrt{\frac{2r^2}{k^2}} = \frac{r\sqrt{2}}{k}$$

$$\frac{r}{m} \rightarrow \frac{-rm}{(m^2-1)^2} = \tan \theta = \sqrt{r} \rightarrow -rm = \sqrt{r}(m^2-1) \rightarrow -rm = \sqrt{r}m^2 - \sqrt{r}$$

$$\rightarrow \sqrt{r}m^2 + rm - \sqrt{r} = 0 \quad \frac{1}{\sqrt{r}}m^2 + \frac{r}{\sqrt{r}}m - 1 = 0 \quad \frac{r}{\sqrt{r}} \pm \sqrt{\frac{r}{r} + 1}$$

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

$$\left[\begin{array}{l} \frac{r}{\sqrt{r}} = \frac{1}{\sqrt{r}} \\ \frac{-r}{\sqrt{r}} = -\sqrt{r} \end{array} \right] \rightarrow \frac{1}{\sqrt{r}} - (-\sqrt{r}) = \frac{1+r}{\sqrt{r}} = \frac{r\sqrt{r}}{r}$$

$$\rightarrow BC \Rightarrow \frac{11-r}{r-r} = r \Rightarrow 2x - r = y$$

$$AH \rightarrow A(1, 4) \rightarrow \frac{|r+(1)(4)-r|}{\sqrt{r}} = \frac{1}{\sqrt{r}} = r\sqrt{r}$$

$$BC \rightarrow ry - rx + 19 = 0 \rightarrow ry - rx + 19 = 0$$

$$AB \rightarrow y + rx - r = 0 \rightarrow -ry - rx + 19 = 0$$

$$-11x - 19 \rightarrow x \leq 1 \rightarrow y = 1 \rightarrow (1, 1)$$

$$AC: ry - rx - 19 = 0, (1, 1) \rightarrow \frac{|-r(1) + r(1) - 19|}{\sqrt{r^2 + r^2}} = \frac{19}{r\sqrt{2}}$$

$$y = an + b \quad \begin{matrix} n = -\frac{r}{q} \\ y = -\frac{r}{q} \end{matrix} \quad -\frac{r}{q} \text{ as } q \rightarrow a = -1 \Rightarrow y = -1n - 4$$

$$\text{for } x=0 \rightarrow y=n \rightarrow n = -1n - 4 \rightarrow 2n = -4 \rightarrow n = \frac{-4}{2} = -\frac{r}{q} \quad \text{5}$$

$$\frac{r}{q} \quad \sqrt{\frac{r}{q} + \frac{r}{q}} = n = \frac{\sqrt{1}}{1} = \frac{r\sqrt{r}}{r}$$

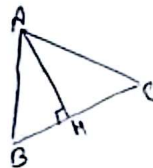
$$y = an + 1 \quad \text{as } n = a - 1 \rightarrow \frac{1}{a} = a \rightarrow ar = 1 \rightarrow a = \frac{1}{r} \quad \text{5}$$

$$\rightarrow y = n + 1 \quad \text{as } \frac{|1+1|}{\sqrt{1+1}} = \frac{\sqrt{2}}{1} \quad / \quad \text{as } \frac{r}{q} + n^r = 10 = \frac{0}{r}$$

$$n^r = \frac{r}{q} \rightarrow n = \frac{\sqrt{r}}{1} \rightarrow \frac{\sqrt{r}}{1} \times \frac{\sqrt{r}}{1} = \frac{r}{1} = 10$$

$$A(r, 0) \quad n = \frac{r}{q} = 10 \rightarrow AH = \frac{|1(r) + (-1)(0) - 1|}{\sqrt{1+1}} = \frac{r}{\sqrt{2}} = \frac{r\sqrt{2}}{2}$$

$$S = \frac{\frac{r\sqrt{2}}{2} \times \frac{r\sqrt{2}}{2}}{r} = \frac{r^2}{r} = 1/10$$

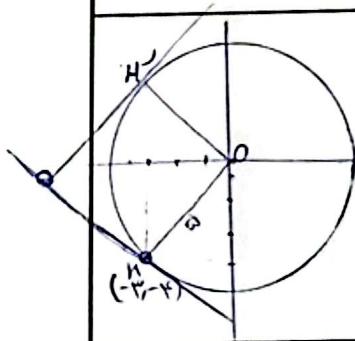


$$BC \Rightarrow 9 - \frac{9}{1} = \frac{1}{1} = BC^r \rightarrow BC = \frac{9}{\sqrt{1}}$$

$$\frac{a-b}{-\frac{r}{q} - (-\frac{r}{q})} = \sqrt{r} \rightarrow a-b = \frac{\sqrt{r}}{q}$$

$$\sqrt{(a-b)^2 + (-\frac{1}{q})^2} = \sqrt{\frac{r}{r^2q} + \frac{1}{r^2q}} = \frac{r}{q} = \frac{1}{r}$$

$$\text{as } \sqrt{r} \times \frac{1}{r} = \frac{\sqrt{r}}{r}$$



$$OH \rightarrow \sqrt{(\cdot + r)^2 + (\cdot + r)^2} = \Delta$$

$$OH = OH' = \Delta$$

$$\text{as } OH \sim -\frac{r}{q}n - \frac{r}{q} = y$$

$$OH' \sim \frac{r}{q}n + \frac{r}{q} = y$$

$$\rightarrow (-r) - (-r) = -\sqrt{r-1} = \sqrt{r}$$