

نام و نام خانوادگی پانزدهم تیرماه ۱۳۹۷ کلاس پاسخنامه تشریحی تکلیف شماره ۱۹	
$(f_9 - 9)(r_9, 1) \rightarrow a = -v$ $m = (r_9, 1) \rightarrow a' = \frac{1}{v}$ $y - 1 = \frac{1}{v}(x - r) \rightarrow y - 1 = \frac{1}{v}x - \frac{r}{v} \rightarrow y = \frac{1}{v}x + \frac{r}{v}$	۱
$A(r_9, 1) \quad B(-8, 5) \quad C(-1, 2)$ $BC = \sqrt{9+16} = 5$ $AH \rightarrow BC = -\frac{5}{3}x + \frac{5}{3} - y = 0 \rightarrow AH = \frac{ -r-1+\frac{5}{3} }{\frac{\sqrt{34}}{3}} = \frac{\frac{10}{3}}{\frac{\sqrt{34}}{3}} = \frac{10}{\sqrt{34}}$ $a - r = 3$	۲
$\left. \begin{aligned} fg - ax - r = 0 &\rightarrow ry - x - 1 = 0 \\ ry - x - v = 0 \end{aligned} \right\} \frac{ -v+1 }{\sqrt{a}} = \frac{9}{\sqrt{a}} \rightarrow r = \frac{3}{a} \rightarrow P = \pi r^2 = \frac{9}{a} \pi$	۳
$BC = \sqrt{4+16} = \sqrt{20}$ $CH \rightarrow AB = -x + 5 - y = 0 \rightarrow \frac{ 1+3+5 }{\sqrt{2}} = \frac{9}{\sqrt{2}} = \sqrt{\frac{81}{2}} \rightarrow (\sqrt{20})^2 = (\sqrt{\frac{81}{2}})^2 + (BH)^2$ $m = (r_9, 2) \rightarrow BM = \sqrt{r}$ $\sqrt{r} - \frac{\sqrt{r}}{2} = \frac{\sqrt{r}}{2}$ $BH = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$	۴
$\frac{m+1}{r_m - f} = \frac{a - m}{r_m - r} \rightarrow 3m^2 + m - r = -2m^2 + 17m - r_0 \rightarrow 5m^2 - 16m + 11 = 0$ $\Delta < 0 \rightarrow$ فاصله هیچ مقدار	۵

$$\begin{cases} AB: x+2y=1 \\ AC: y=2x-1 \\ BC: x+y=1 \end{cases} \left\{ \begin{array}{l} A: (1,1) \\ B: (\frac{1}{2}, -1) \\ C: (\frac{1}{2}, \frac{1}{2}) \end{array} \right\} M: (\frac{1}{3}, \frac{1}{3}) \rightarrow AM = \frac{\sqrt{2}}{3}$$

$$AH = \frac{|1+1-1|}{\sqrt{2}} = \frac{1}{\sqrt{2}} \quad \frac{AM}{AH} = \frac{\frac{\sqrt{2}}{3}}{\frac{1}{\sqrt{2}}} = \boxed{\frac{2}{3}}$$

$$\frac{x}{A} + \frac{y}{B} = 1 \rightarrow xB + yA = AB \rightarrow A = yB$$

$$\frac{|AB|}{\sqrt{A^2+B^2}} = \sqrt{\frac{1}{2}} \rightarrow \frac{1}{\sqrt{2}} B = \sqrt{\frac{1}{2}} \rightarrow B = 1, A = 1$$

$$\sqrt{1+1} = \boxed{\sqrt{2}}$$

$$my - fn = pm \rightarrow y = \frac{f \cdot n + pm}{m} = \frac{f}{m} n + r \quad \left\{ \begin{array}{l} \frac{f}{m} n + r = (1-m)n + r \rightarrow (0, r) \\ y + mn = n + r \rightarrow y = (1-m)n + r \end{array} \right.$$

$$y = \frac{f}{m} n + r = 0 \rightarrow x = -\frac{m}{f}, y = 0$$

$$y = (1-m)n + r = 0 \rightarrow x = -\frac{r}{1-m} \rightarrow x = \frac{r}{m-1}, y = 0 \quad (\sqrt{2}-1)(-\sqrt{2}-1)(r) = \boxed{-1}$$

$$m^2 + fm - 1 = 0 \rightarrow m = \frac{-f \pm \sqrt{f^2 + 4}}{2} \rightarrow -r \pm \sqrt{2}$$

$$px - r = -\frac{1}{p} x - 1 \rightarrow \frac{1}{p} x = r \rightarrow x = \frac{r}{p} \rightarrow (\frac{r}{p}, -\frac{r}{p})$$

$$\left\{ \begin{array}{l} A: (\frac{r}{p}, -\frac{r}{p}) \\ M: (1, 1) \end{array} \right\} A': (\frac{1}{2}, -\frac{1}{2}) \rightarrow y - \frac{1}{2} = 1(x + \frac{1}{2}) \rightarrow \boxed{y = px - 1}$$

$$\left\{ \begin{array}{l} y = x + a \\ y = -x + r \end{array} \right\} x + a = -x + r \rightarrow x = -1 \rightarrow M = (-1, 1)$$

$$\left\{ \begin{array}{l} A: (1, 1) \\ M: (-1, 1) \end{array} \right\} A': (-1, 1)$$

$$pb - a = 1p + r = \boxed{1a}$$