

از دهم درس A به دلیل نوشتن نام خانوادگی نه شده (۵) محاسبه

۱-
 $\frac{f+r}{r} = 3, \frac{1-r}{r} = 1 \Rightarrow (3, 1) \text{ وسط } AB$
 $y = \frac{1}{2}x + \frac{5}{2}$
 $\frac{-r-1}{1-r} = \frac{-11}{r} = -r = -0.5 \Rightarrow \frac{1}{r} = 0.5 \Rightarrow r = 2$
 $\Rightarrow (3, 1) \Rightarrow 1 = \frac{1}{2}r + b \Rightarrow b = \frac{1}{2}$
 $y = \frac{1}{2}x + \frac{1}{2}$

۲-
 $BC \sqrt{(v-3)^2 + (-1+1)^2} = \sqrt{16+1} = 5$
 $BC(3, 1) = \frac{v-3}{-1+1} = \frac{1}{-1} = -1 = a \Rightarrow y = -\frac{1}{2}x + b \xrightarrow{(3, 1)} 1 = -\frac{3}{2} + b \Rightarrow b = \frac{5}{2} \Rightarrow y = -\frac{1}{2}x + \frac{5}{2}$
 $\Rightarrow \frac{|3y + 1 - 5|}{\sqrt{9+1}} = \frac{3-4}{2} = -\frac{1}{2} = \frac{1}{2} = r(2)$

۳-
 $a=a', b=b', c=c' \Rightarrow \begin{cases} ry - x = v \\ fy - ax = r \end{cases} \Rightarrow \begin{cases} ry - x = v \\ ry - ax = r \end{cases} \Rightarrow \begin{cases} 1c - c' \\ \frac{v-1}{r} = \frac{r-1}{r} = r \Rightarrow \frac{v}{r} = r \end{cases}$
 $\frac{r-1}{r-1} = \frac{r}{-r} = -1 = a_{AB} \Rightarrow y = -x + b \xrightarrow{(3, 1)} 1 = -3 + b \Rightarrow b = 4 \Rightarrow y = -x + 4$
 $d = \frac{4}{\sqrt{5}} \rightarrow \text{شعاع} = \frac{4}{\sqrt{5}} \Rightarrow S = \pi \times \frac{4}{\sqrt{5}} = \frac{4}{\sqrt{5}} \pi$

۴-
 $\frac{r-1}{r-1} = \frac{r}{-r} = -1 = a_{AB} \Rightarrow y = -x + b \xrightarrow{(3, 1)} 1 = -3 + b \Rightarrow b = 4 \Rightarrow y = -x + 4$
 $\frac{|3 + 1 - 5|}{\sqrt{r}} = \frac{|1-1-5|}{\sqrt{r}} = \frac{4}{\sqrt{r}} \Rightarrow r = 16 \Rightarrow (3, 1) \Rightarrow \sqrt{(3+3)^2 + (1+1)^2} = \sqrt{16+4} = \sqrt{20} = \sqrt{4 \cdot 5} = 2\sqrt{5}$
 $(m^2 - 4n^2) = 4m^2 \Rightarrow (\sqrt{4})^2 - (\frac{1}{\sqrt{4}})^2 = 4(1 - \frac{1}{4}) = \frac{12}{4} - \frac{1}{4} = \frac{11}{4} = \sqrt{\frac{11}{4}} = \frac{1}{2}\sqrt{11}$

۵-
 $(5-m)y = (r-3m)x + v \Rightarrow y = \frac{r-3m}{5-m}x + \frac{v}{5-m}$
 $(m+1)x + 1 = (r-m)y \Rightarrow y = \frac{m+1}{r-m}x + \frac{1}{r-m}$
 $\Rightarrow \frac{r-3m}{5-m} = \frac{m+1}{r-m} \Rightarrow \frac{r-3m}{r-m} = \frac{m+1}{5-m} \Rightarrow \frac{r-3m}{r-m} = \frac{m+1}{5-m}$
 $\Rightarrow -3m^2 - m + 2 = r^2 - 14m + 2 \Rightarrow 3m^2 - 13m = 0 \Rightarrow m(3m-13) = 0 \Rightarrow m = 0 \text{ یا } m = \frac{13}{3}$

۶-
 $B \begin{cases} x+2y=3 \\ -x-y=-1 \end{cases} \Rightarrow y=1, x=1$
 $C \begin{cases} y-2x=-1 \\ x+y=1 \end{cases} \Rightarrow x=\frac{2}{3}, y=\frac{1}{3}$
 $A \begin{cases} x+y=3 \\ y-rm=-1 \end{cases} \Rightarrow y=1, x=1$
 $AM = \frac{|x+y-1|}{\sqrt{1+1}} = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$
 $\Rightarrow \frac{AM}{AH} = \frac{\frac{\sqrt{2}}{2}}{\frac{\sqrt{2}}{2}} = 1$

۷-
 $y = -\frac{1}{r}x + b \Rightarrow \frac{|y - \frac{1}{r}x + b|}{\sqrt{\frac{1}{r^2} + 1}} = \sqrt{5} \Rightarrow |b| = \sqrt{5} \Rightarrow b = \pm\sqrt{5}$
 $\Rightarrow \frac{1}{r} = \frac{5}{-x} \Rightarrow \frac{1}{r} = 5 \Rightarrow r = \frac{1}{5}$
 $\Rightarrow \sqrt{(1-0)^2 + (-5)^2} = \sqrt{1+25} = \sqrt{26} = \sqrt{2 \cdot 13} = \sqrt{2} \cdot \sqrt{13}$

$y = (1-h)x + r \Rightarrow y = \frac{r}{m}x + r \Rightarrow (1-h)x + r = \frac{r}{m}x + r \Rightarrow x = 0 \Rightarrow y = r \Rightarrow A = (0, r)$ -1

$(1-h)x + r = \frac{r}{m}x + r \Rightarrow x_1 = \frac{r}{m-1}$
 $\frac{r}{m}x + r = \frac{r}{m}x + r \Rightarrow x_2 = \frac{r}{m}$ } x برشور ده $\Rightarrow |x_2 - x_1| = \text{عرض}$ $\Rightarrow |\frac{r}{m-1} + \frac{r}{r}| \Rightarrow$ 5
 $\frac{\Delta}{r} = \frac{1}{r} \times r \times |\frac{r}{m-1} + \frac{r}{r}|$
 $\frac{r}{m-1} + \frac{r}{r} = -\frac{4}{r}$
 $\Rightarrow m = -2 - \sqrt{8}, n = -2 + \sqrt{8}$
 $3 \times (-2 + \sqrt{8})(-2 - \sqrt{8}) = -3$

$\frac{|y - rx + r|}{\sqrt{a^2 + b^2}} = \frac{r}{\sqrt{8}} \Rightarrow \frac{|-2 - 2 + r|}{\sqrt{8}} = \frac{r}{\sqrt{8}} \Rightarrow \frac{r - c'}{\sqrt{a^2 + b'^2}} = \frac{r}{\sqrt{8}}$ -1
 $\Rightarrow \frac{r}{\sqrt{8}} = \frac{|-3 - c'|}{\sqrt{1+1}} = \frac{|-3 - c'|}{\sqrt{2}} \Rightarrow r = |-3 - c'|$
 $-r = -3 - c' \Rightarrow r = c' \times$
 $r = -3 - c' \Rightarrow r = c' /$ 5



$\Rightarrow y = 2x - 9$

$a = -1$ فرضه $\Rightarrow y = -x + b$ $\Rightarrow y = -x + 5$ 5
 $\begin{cases} y = x + 5 \\ y = -x + 5 \end{cases} \Rightarrow y = 5, x = 0$
 $\Rightarrow \frac{x+1}{r} \Rightarrow x = -3 \Rightarrow y = \frac{r+5}{r} \Rightarrow y = 4$
 $= (4)r - (-3) = 12 + 3 = 15$