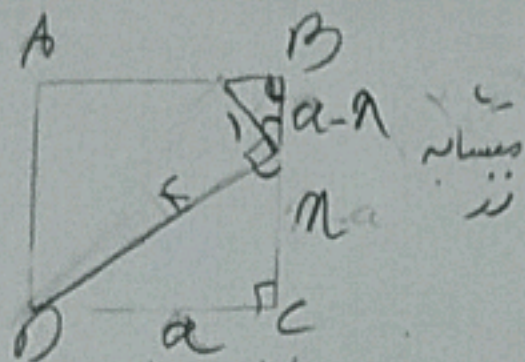
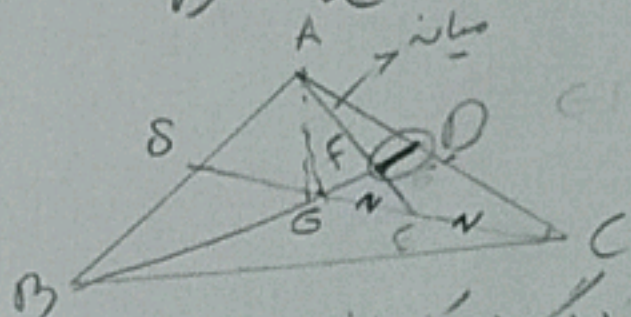




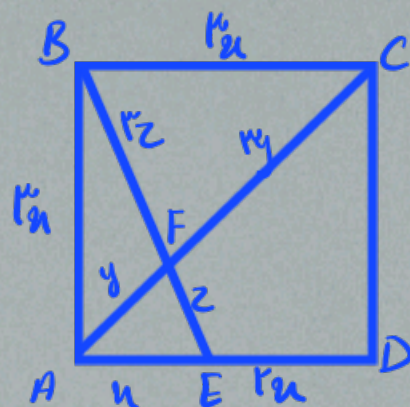
$$\frac{f}{1} = \frac{a}{a-n} \Rightarrow a : (a-n) \Rightarrow n = \frac{f}{a} a$$

$$a^2 \sim n^2 : 14 \Rightarrow \frac{a^2}{14} \sim 14 \Rightarrow a^2 = \frac{14 \times 14}{28} = 7, 28$$



$$\frac{BD}{FD} = \frac{\frac{2}{3} GD}{\frac{1}{3} GD} = 2$$

مساحت مثلث با مساحت مربع برابر است
 $\frac{BD}{FD} = \frac{2}{1} = 2$



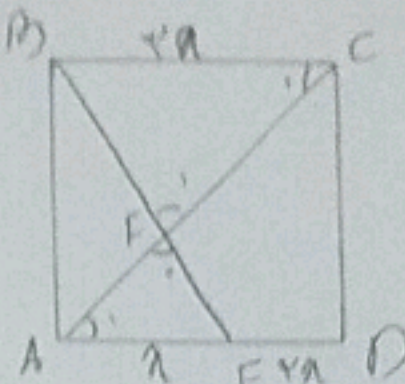
$$BE^2 = (a-n)^2 + n^2 \Rightarrow BE = \sqrt{10}n \rightarrow z + 3z = \sqrt{10}n \rightarrow z = \frac{\sqrt{10}}{4}n$$

$$(AC)^2 = (a-n)^2 + (a-n)^2 \Rightarrow AC = \sqrt{2}a \rightarrow y = \frac{\sqrt{2}}{2}a$$

$$\frac{EF}{AF} = \frac{z}{y} = \frac{\sqrt{10}}{4}$$

1A, 5

نشان داد



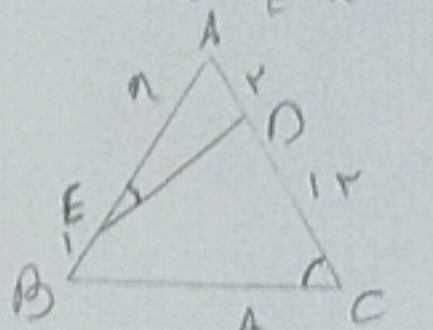
$$\frac{EF}{AF}$$

$BFC \sim AFE$ $\Rightarrow \frac{AF}{FC} = \frac{FE}{BF} = \frac{1}{r}$
 $BC \parallel AD$
 $\angle C = \angle A$
 $\angle F = \angle F$
 $\angle C = \angle A$

معادله
 $\Rightarrow \frac{BF}{FC} = \frac{FE}{AF} = \frac{1}{r}$

1

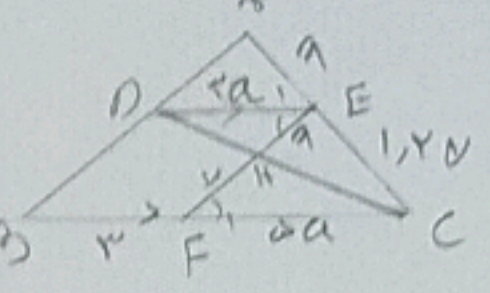
1.5



$AED \sim DCB$

$\Rightarrow \frac{r}{a-1} = \frac{a}{1-a} \Rightarrow r = a(1-a) \Rightarrow a = r$

5

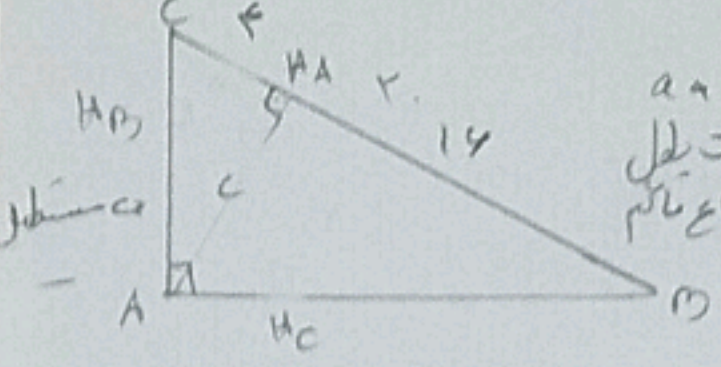


$BC = ? \Rightarrow 1, r, a \Rightarrow r = a$

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

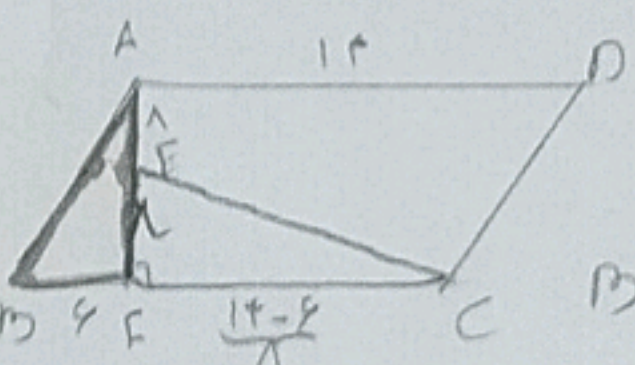
5

5



$\frac{\sqrt{a^2 + b^2}}{\sqrt{1 + r^2}} \Rightarrow \sqrt{\frac{a^2 + b^2}{1 + r^2}} \Rightarrow \sqrt{\frac{1}{1 + r^2}} \Rightarrow \frac{1}{\sqrt{1 + r^2}}$

5

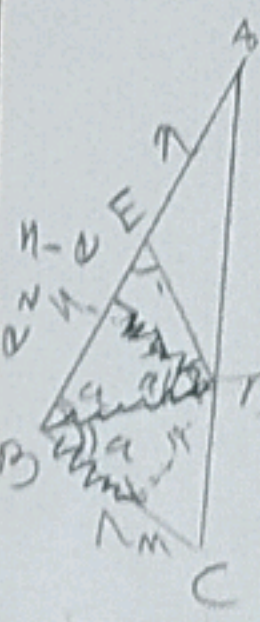


$\frac{BF}{EF} = \frac{AF}{CF} \Rightarrow \frac{r}{a} = \frac{1-a}{a} \Rightarrow r = a(1-a) \Rightarrow a = r$

$a = 1, a = r \Rightarrow r = a(1-a) \Rightarrow a = r$

5

5



اصول ماریت و پیرامونیک صلواتی

$DM = ND$

نالی

$\frac{a, a}{a} = \frac{a, a, a}{a+1} \Rightarrow a = 1$

$a = 1, a = r \Rightarrow r = a(1-a) \Rightarrow a = r$

$\frac{AN}{AB} = \frac{ND}{BC}$

5

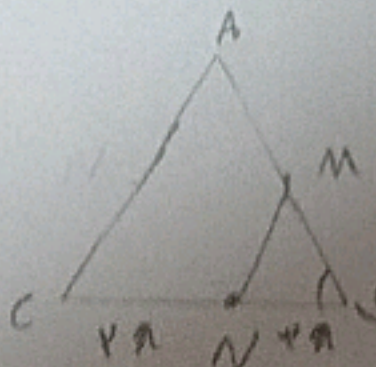
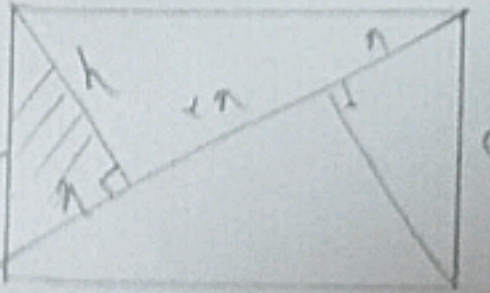
$h^2 = r^2 \Rightarrow h = \sqrt{r^2}$

$\delta = \frac{r}{a} \Rightarrow \frac{r}{a} = \frac{1}{a} \Rightarrow r = 1$

$\delta = \frac{h}{a} \Rightarrow \frac{h}{a} = \frac{1}{a} \Rightarrow h = 1$

5

5



$\frac{BM}{AM}$

$\Rightarrow \frac{BM}{AM} = \frac{1}{a} \Rightarrow \frac{BM}{AM + MB} = \frac{1}{a} \Rightarrow \frac{BM}{AM} = \frac{1}{a}$

5

5