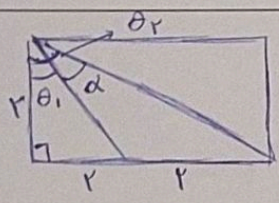
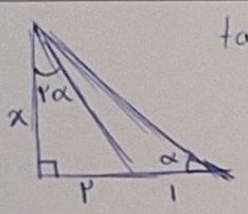


۱۵,۷۵

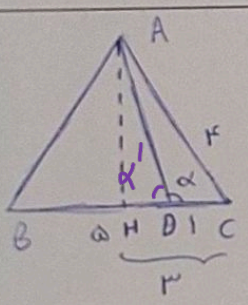
$S = \frac{1}{r} a b \sin \alpha$ $r, \omega = \frac{1}{r} (\sqrt{3})(2) \sin \alpha$ $\sin \alpha = \frac{r, \omega}{2\sqrt{3}} = \frac{\sqrt{3}}{2}$ $\alpha = 120^\circ$ یا 60°
 $\frac{120^\circ}{60^\circ} = \boxed{2}$



$\tan \theta_1 = \frac{r}{r} = 1$ $\tan \theta_r = \frac{r}{r} = 1$
 $\tan(\alpha) = \frac{\tan \theta_1 - \tan \theta_r}{1 + \tan \theta_1 \tan \theta_r} \rightarrow \frac{1 - 1}{1 + 1} = \frac{0}{2} = 0$ (Incorrect in original)
 $\cot \alpha = \frac{1}{\tan \alpha} = \boxed{3}$



$\tan \alpha = \frac{x}{p}$ $\tan 2\alpha = \frac{r}{q}$
 $\tan 2\alpha = \frac{r + \tan \alpha}{1 - \tan \alpha} \rightarrow \frac{\frac{r}{q}}{1 - \frac{x}{p}} = \frac{r}{q - \frac{xr}{p}}$
 $\alpha^r = \frac{q}{r}$ $\alpha = \frac{p}{r}$
 $\cot \alpha = \frac{p}{\alpha} = \boxed{2}$



$AH^r = AC^r - CH^r \rightarrow r^r - p^r = v$ $AH = \sqrt{v}$
 $\tan \alpha = \frac{AH}{DH} = \frac{\sqrt{v}}{r}$
 $\alpha = \widehat{ADH}$ $\tan \alpha' = -\tan \alpha = -\frac{\sqrt{v}}{r}$

$r \sin^r \alpha + \cos^r \alpha = \frac{r}{r}$ $\sin^r \alpha = 1 - \cos^r \alpha \rightarrow r - r \cos^r \alpha + \cos^r \alpha = \frac{r}{r}$
 $\cos^r \alpha = \frac{r}{r}$ $\cos \alpha = \sqrt{\frac{r}{r}}$ $\sin \alpha = \sqrt{1 - \frac{r}{r}} = \frac{1}{\sqrt{r}}$
 $\tan^r \alpha = \frac{\sin^r \alpha}{\cos^r \alpha} = \frac{(\frac{1}{\sqrt{r}})^r}{(\frac{r}{r})^r} = \frac{1}{r} = \boxed{\frac{r}{r}}$
 $\sin^r \alpha + \sin^r \alpha + \cos^r \alpha = \frac{r}{r}$
 $\rightarrow \sin^r \alpha = \frac{1}{r}$ $\cos^r \alpha = \frac{r}{r}$
 $\tan^r \alpha = \frac{1}{r}$

