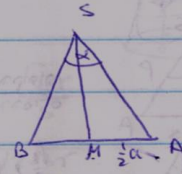
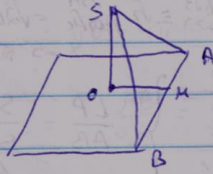
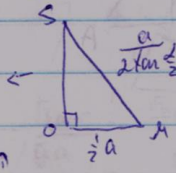


3.74  
6



$$\frac{MA}{SM} = \tan \frac{\alpha}{2} \rightarrow SM = \frac{a}{2 \tan \frac{\alpha}{2}}$$

$$S_0 = \sqrt{SM^2 - OM^2} = \sqrt{\frac{a^2}{4 \tan^2 \frac{\alpha}{2}} - \frac{a^2}{4}} = \frac{a}{2 \tan \frac{\alpha}{2}} \sqrt{1 - \tan^2 \frac{\alpha}{2}}$$

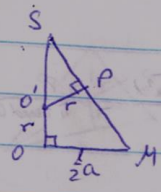


SAB - kőf pind lén pfi az oldalon elon van

P - a (SM f) rona is le pof

post

me



$\triangle S_0 P M \sim S M O$

$$\frac{O'P}{OM} = \frac{S_0 P}{SM}$$

$$\frac{r}{\frac{1}{2}a} = \frac{S_0 - r}{\frac{a}{2 \tan \frac{\alpha}{2}}}$$

$$r = \frac{\frac{a}{2 \tan \frac{\alpha}{2}} \sqrt{1 - \tan^2 \frac{\alpha}{2}} - r}{\frac{1}{\tan \frac{\alpha}{2}}}$$

$$\frac{r}{\tan \frac{\alpha}{2}} = \frac{a}{2 \tan \frac{\alpha}{2}} \sqrt{1 - \tan^2 \frac{\alpha}{2}} - r$$

$$r \left( 1 + \frac{1}{\tan \frac{\alpha}{2}} \right) = \frac{a}{2 \tan \frac{\alpha}{2}} \sqrt{1 - \tan^2 \frac{\alpha}{2}}$$

$$r \left( \frac{\tan \frac{\alpha}{2} + 1}{\tan \frac{\alpha}{2}} \right) = \frac{a \sqrt{1 - \tan^2 \frac{\alpha}{2}}}{2 \tan \frac{\alpha}{2}}$$

$$r = \frac{a \sqrt{1 - \tan^2 \frac{\alpha}{2}}}{1 + \tan \frac{\alpha}{2}}$$

$$S_{10} = 4\sqrt{r^2} = 4\sqrt{\frac{a^2 (1 - \tan^2 \frac{\alpha}{2})}{(1 + \tan \frac{\alpha}{2})^2}} = 4\sqrt{a^2 \frac{\frac{1 - \sin^2 \frac{\alpha}{2}}{\cos^2 \frac{\alpha}{2}}}{(\frac{1 + \sin \frac{\alpha}{2}}{\cos \frac{\alpha}{2}})^2}} = \frac{4\sqrt{a^2 \cos^2 \frac{\alpha}{2}}}{1 + \sin \frac{\alpha}{2}}$$

3.87



S