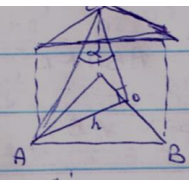
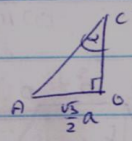
3.44
6

א

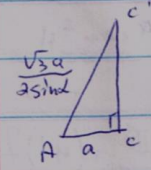


ב

$h = \frac{\sqrt{3}}{2}a$



$AC' = \frac{AO}{\sin\alpha} = \frac{\frac{\sqrt{3}}{2}a}{\sin\alpha} = \frac{\sqrt{3}a}{2\sin\alpha}$



$CC' = \sqrt{AC'^2 - AC^2} = \sqrt{\frac{3a^2}{4\sin^2\alpha} - a^2} = \frac{a}{2\sin\alpha}\sqrt{3 - 4\sin^2\alpha}$

ג $V = \text{שטח בסיס} \cdot \text{גובה} = \frac{\sqrt{3}a^2}{4} \cdot \frac{a}{2\sin\alpha}\sqrt{3 - 4\sin^2\alpha} = \frac{a^3}{8\sin\alpha}\sqrt{9 - 12\sin^2\alpha}$