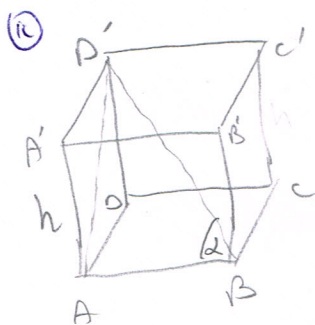


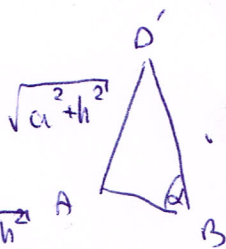
11  
(249)



$$D'A = \sqrt{D'O^2 + AO^2} = \sqrt{h^2 + a^2}$$

0 < alpha < pi/2  
a < h

AB < AD' < AD  
AB < AD' < AD



$$\tan \alpha = \frac{AD'}{AB} = \frac{\sqrt{a^2 + h^2}}{a}$$

$$\tan^2 \alpha = \frac{a^2 + h^2}{a^2} \rightarrow a^2 \tan^2 \alpha = a^2 + h^2$$

$$a^2 (\tan^2 \alpha - 1) = h^2 \rightarrow a^2 = \frac{h^2}{\tan^2 \alpha - 1}$$

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

$$V_{ABCD A' B' C' D'} = AB \cdot BC \cdot AA' = a \cdot a \cdot h \left( \frac{h}{\sqrt{\tan^2 \alpha - 1}} \right)^2 \cdot h = \frac{h^3}{\tan^2 \alpha - 1}$$

(b)  $0 < \frac{h}{\sqrt{\tan^2 \alpha - 1}}$   $\alpha < \pi/2$   $a < h$

$$0 < \sqrt{\tan^2 \alpha - 1} \rightarrow \tan^2 \alpha > 1$$

$$\alpha > 45^\circ$$

$45^\circ < \alpha < 90^\circ$   $\alpha < 90^\circ$   $\alpha > 45^\circ$   $\alpha < 90^\circ$   $\alpha > 45^\circ$   $\alpha < 90^\circ$   $\alpha > 45^\circ$