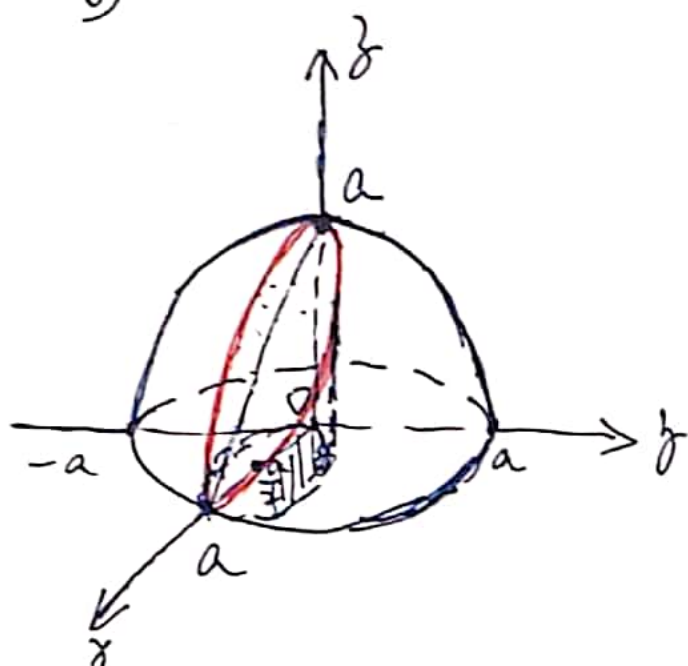
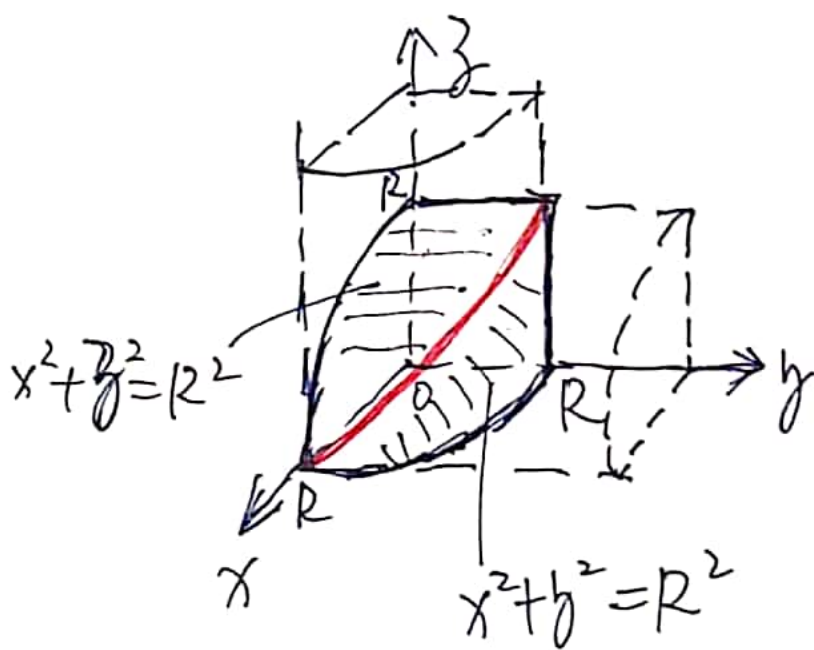


1. 由  $z = \sqrt{a^2 - x^2 - y^2}$  与  $(x - \frac{a}{2})^2 + y^2 = (\frac{a}{2})^2$  的交线 P46.

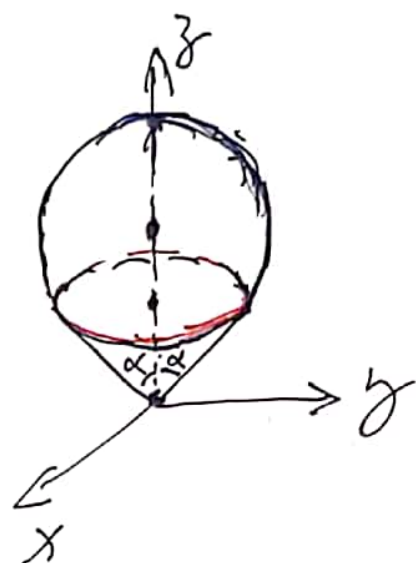
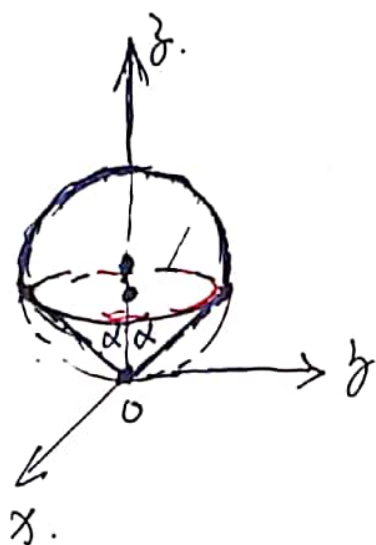


2. 两个底圆半径是  $R$  的直交圆柱面所围立体 P146-147.  
(第一卦限内部分)

$$x^2 + y^2 = R^2, \quad x^2 + z^2 = R^2 \quad (R > 0)$$

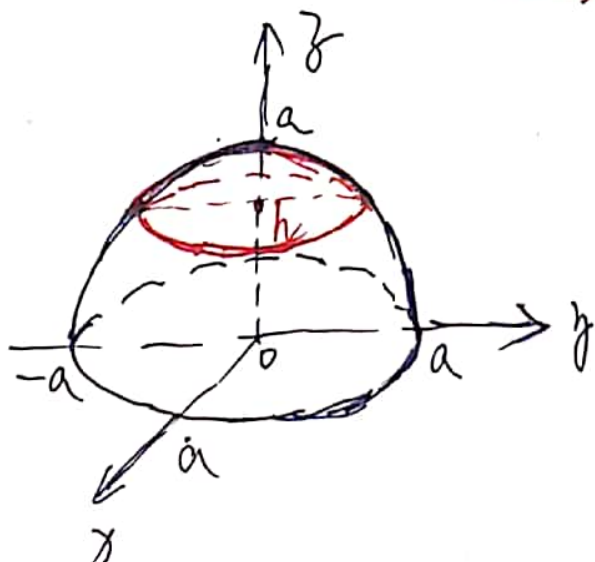


3. 半径为  $a$  的球面与半顶角为  $\alpha$  的内接圆锥面所围立体. P166

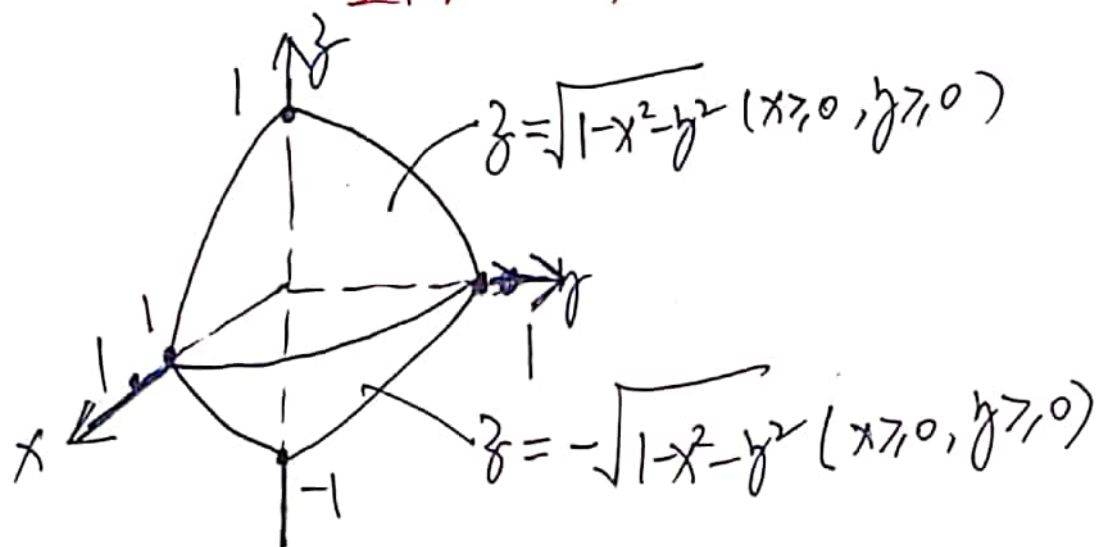


4.  $x^2 + y^2 + z^2 = a^2$  被  $z = h$  ( $0 < h < a$ ) 截出的顶部. P220-221

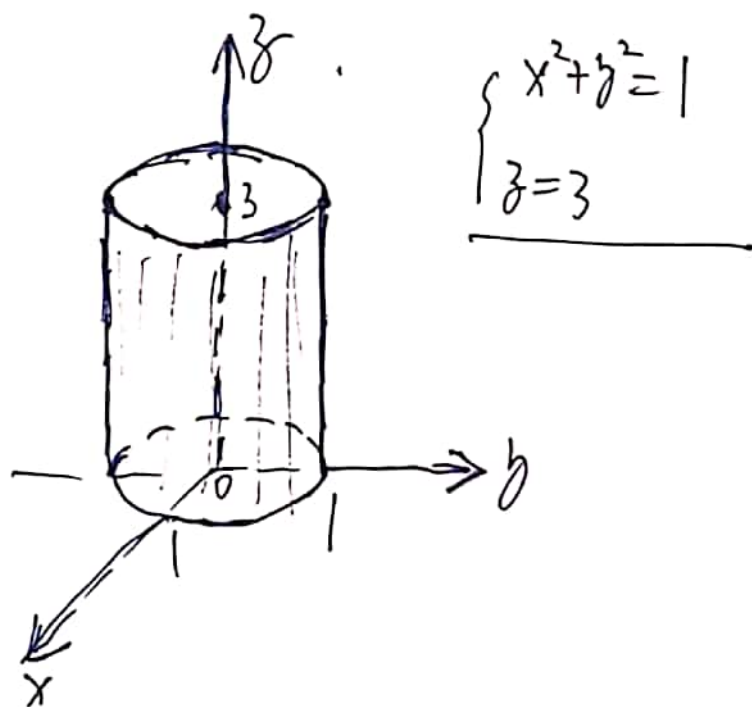
$$\text{交线: } \begin{cases} x^2 + y^2 + z^2 = a^2 \\ z = h \end{cases} \Rightarrow \begin{cases} x^2 + y^2 = \underline{a^2 - h^2} > 0 \\ z = \underline{h} > 0 \end{cases} \quad (\text{圆周})$$



5.  $x^2+y^2+z^2=1$  在  $x \geq 0, y \geq 0$  部分. P<sub>229</sub>

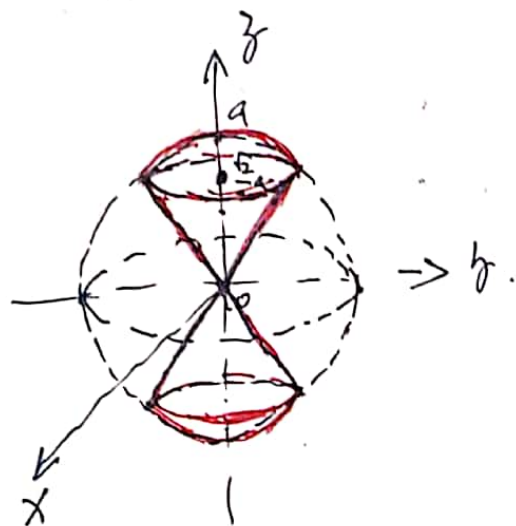


6.  $x^2+y^2=1$  与  $z=0, z=3$  所围立体. P<sub>234</sub>



7.  $x^2+y^2+z^2=a^2 (a>0)$  与  $x^2+y^2=z^2$  所围立体.  $z=\sqrt{x^2+y^2} (z\geq 0)$

交线:  $\begin{cases} x^2+y^2+z^2=a^2 \\ x^2+y^2=z^2 \end{cases} \Rightarrow 2z^2=a^2 \Rightarrow z=\pm\frac{a}{\sqrt{2}} \Rightarrow \begin{cases} x^2+y^2=\frac{a^2}{2} \\ z=\frac{a}{\sqrt{2}}=\frac{\sqrt{2}}{2}a \end{cases}$



②  $\begin{cases} x^2+y^2=\frac{a^2}{2} \\ z=-\frac{a}{\sqrt{2}} \end{cases}$

$8-z=x^2+y^2\geq 0 \Rightarrow 8-z\geq 0$

8.  $z=x^2+y^2$  与  $z=8-x^2-y^2$  所围立体.  $\Rightarrow z\leq 8$ .

交线:  $\begin{cases} z=x^2+y^2 \\ z=8-x^2-y^2 \end{cases} \Rightarrow z=8-z \Rightarrow z=4$  : 交线  $\begin{cases} x^2+y^2=4 \\ z=4 \end{cases}$

