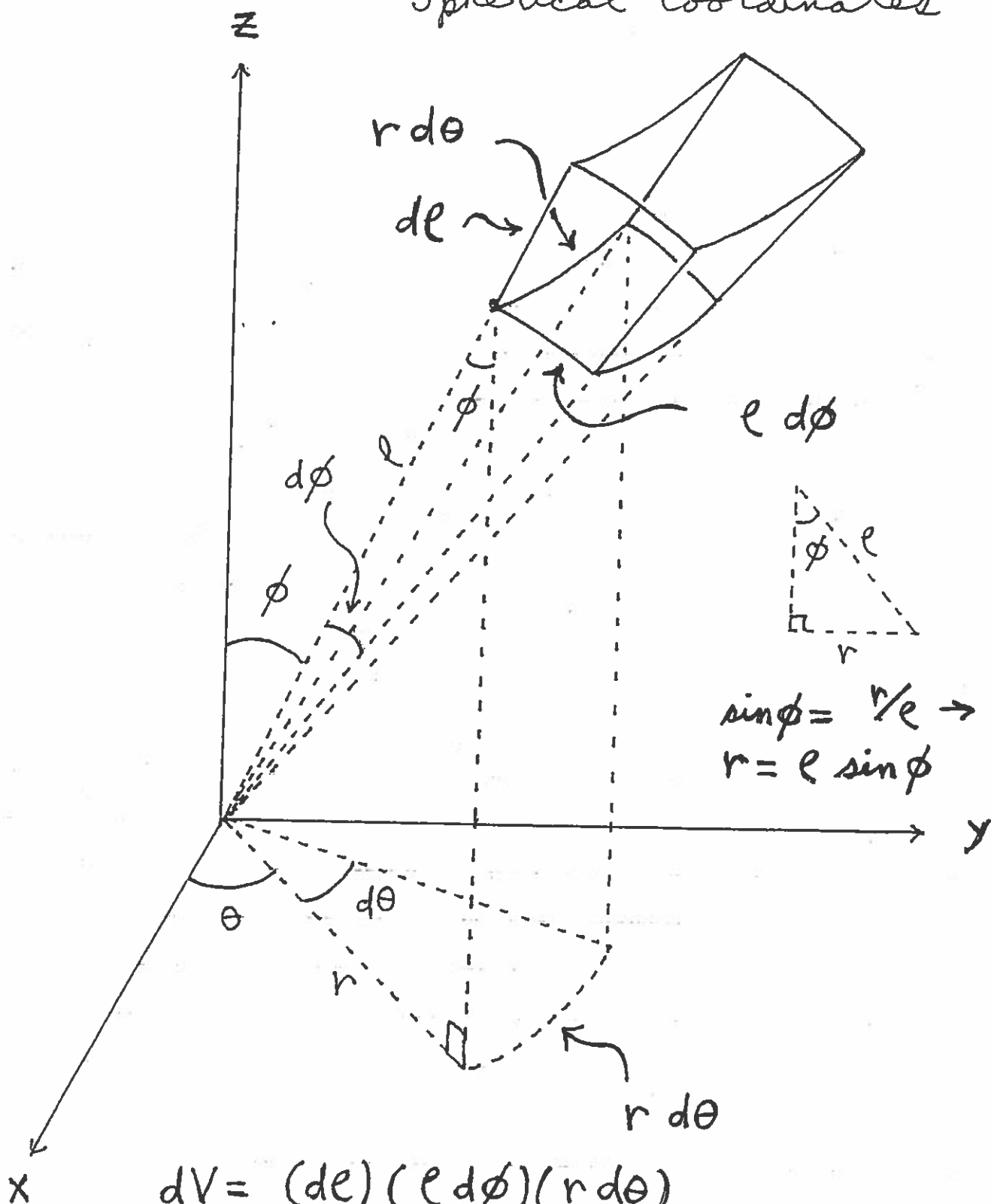


Math 21D
 Kouba
 The Differential of Volume for
 Spherical Coordinates



$$\begin{aligned}
 dV &= (de)(e d\phi)(r d\theta) \\
 &= (de)(e d\phi)(e \sin \phi d\theta) \\
 &= e^2 \sin \phi de d\phi d\theta
 \end{aligned}$$