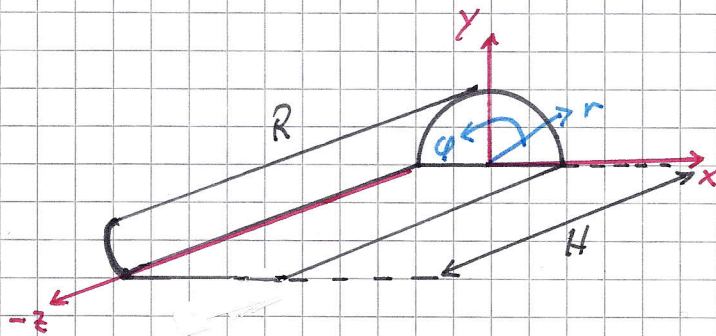


Schwerpunkt eines halben Zylinders

x, y, z kartesische Koordinaten

r, ϕ, h Zylinder Koordinaten

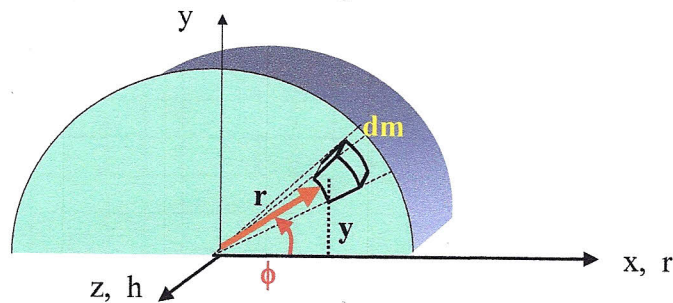


$$x_{sp} = ?$$

$$y_{sp} = ?$$

$$z_{sp} = ?$$

Schwerpunkt eines halben Zylinders



$$dm = \rho dV$$

$$\sin \phi = y/r$$

$$dV = dh dr db$$

$$y = r \sin \phi$$

$$db = r d\phi$$

1. dV bemessen

2. $x_{sp} = 0$

$$z_{sp} = \frac{H}{2}$$

$$y_{sp} = \frac{\int y dm}{\int dm}$$