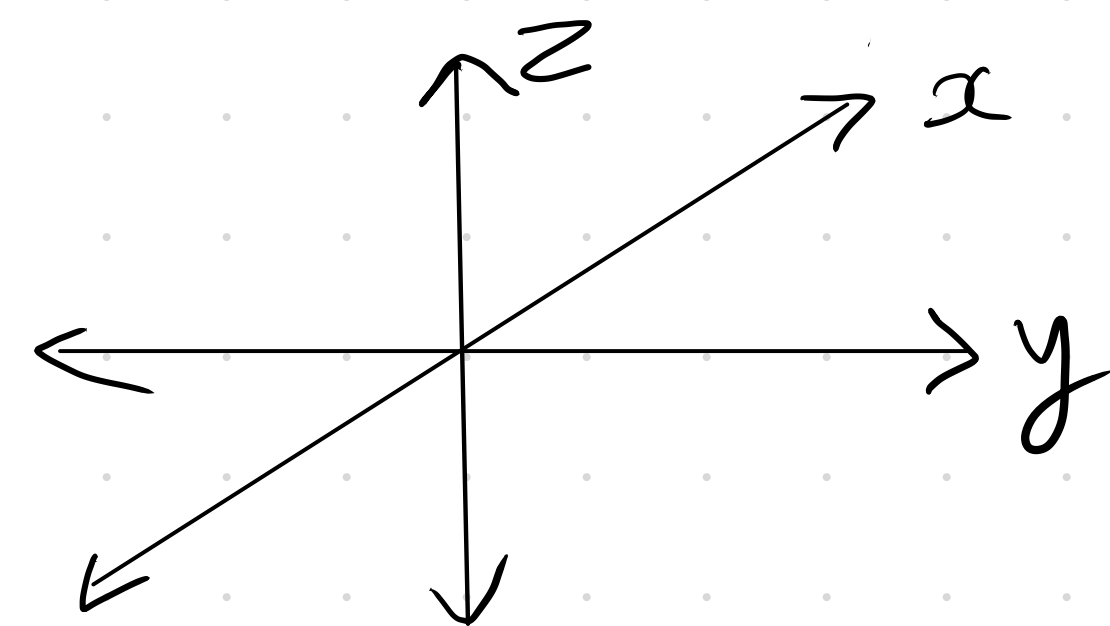


# #3D coordinates

## xyz Cartesian

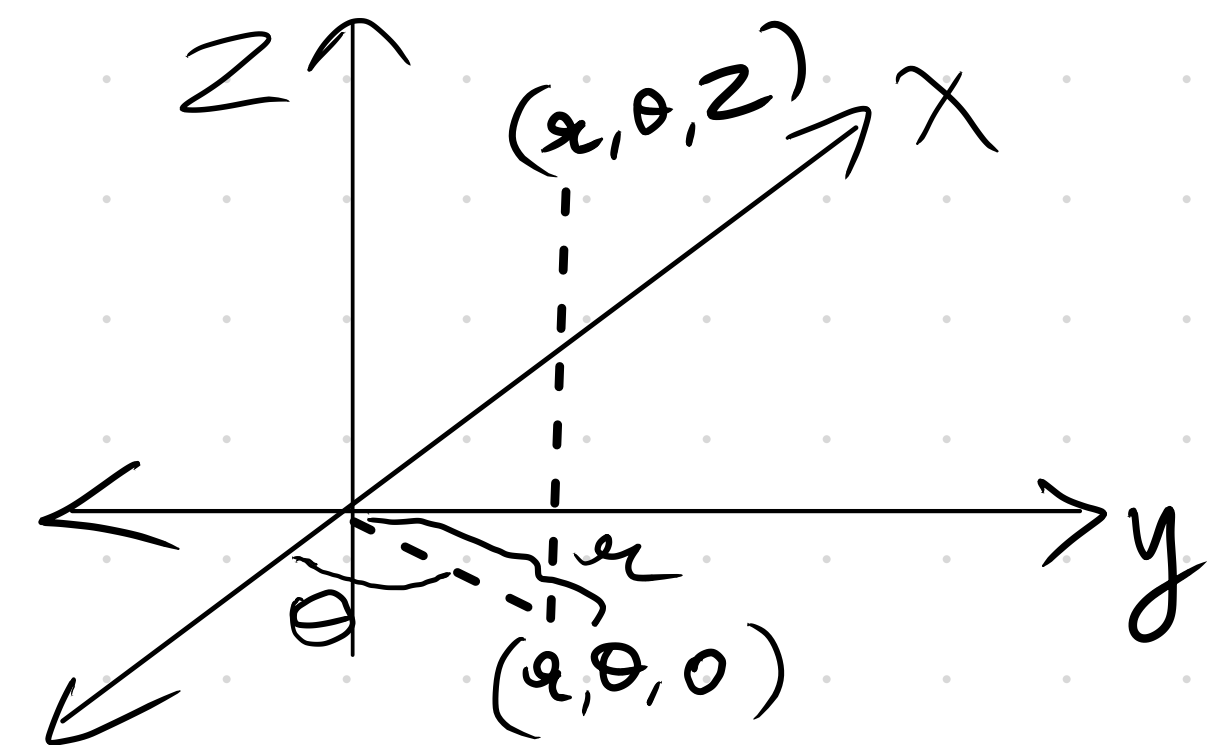


$x$  = distance from the  $y$ - $z$  plane

$y$  = distance from the  $xz$  plane

$z$  = distance from the  $x$ - $y$  plane

## Cylindrical $(\rho, \theta, z)$

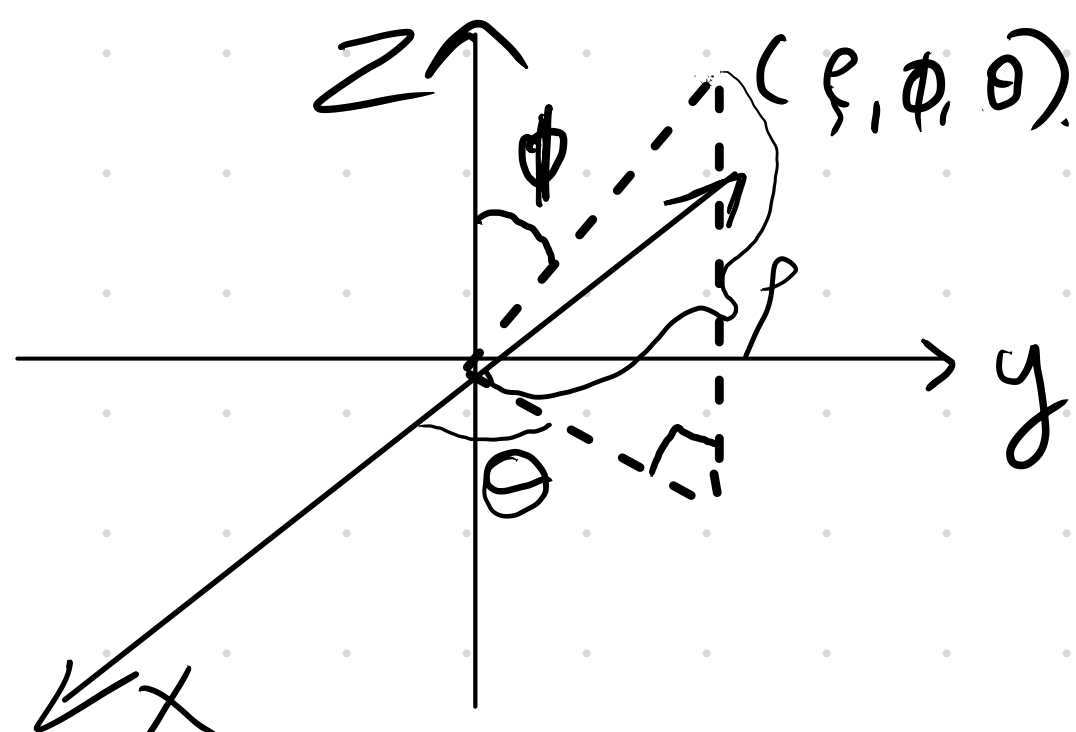


$\rho$ : distance from the  $z$  axis

$\theta$ : an angle made with the  $+x$  axis  
in the  $xy$  plane

$z$ : is  $z$  from the cartesian

## Spherical $(\rho, \phi, \theta)$



$\rho$ : distance from the origin in 3D

$\phi$ : an angle made with  $+z$  axis

$\theta$ : an angle made with the  $+x$  axis  
in the  $xy$  plane