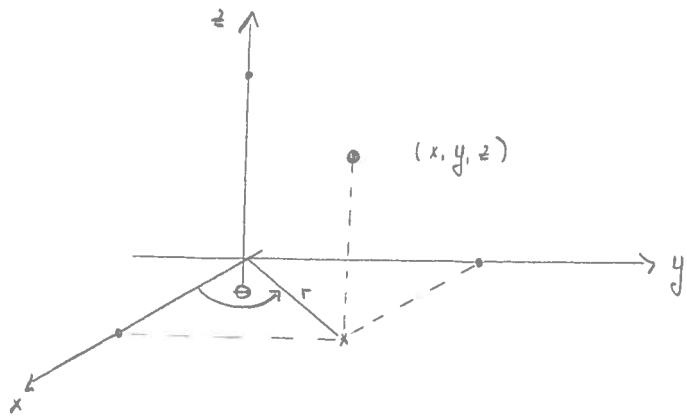


REPETITION LECTURE 2

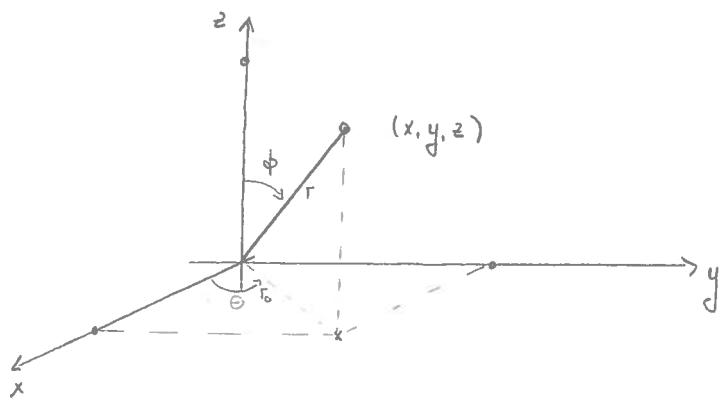
Cylindrical coordinates



The cylindrical coordinates are given by

$$x = r \cos(\theta), \quad y = r \sin(\theta) \quad \text{and} \quad z = z \quad (r = \sqrt{x^2 + y^2})$$

Spherical coordinates



The spherical coordinates are given by

$$x = r \sin(\phi) \cos(\theta), \quad y = r \sin(\phi) \sin(\theta) \quad \text{and} \quad z = r \cos(\phi)$$

$$(r = \sqrt{x^2 + y^2 + z^2})$$