

ICE: CYLINDRICAL COORDINATES

Math21a

1) The point $(1, -1, 1)$ in cylindrical coordinates is $(r, \theta, z) =$.

2) Describe the one sheeted hyperboloid

$$x^2 + y^2 - z^2 = 1$$

in cylindrical coordinates.

3) The point $(1, -1, 1)$ in spherical coordinates is $(\rho, \theta, \phi) =$.

4) Describe the lower part of the cone $x^2 + y^2 = z^2$ in spherical coordinates.