

12.1, number 9: Give a geometric description of the set of points in 3-space which satisfy  $x^2 + y^2 + z^2 = 1$  and  $x = 0$ .

**Answer:** The set of points in 3-space that satisfy  $x^2 + y^2 + z^2 = 1$  and  $x = 0$  is the circle of radius 1 with center at the origin in the  $yz$ -plane

