

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

Answer: The set of points in 3-space that satisfy $x = 2$ and $y = 3$ form a line. The line passes through $(2, 3, 0)$ and is parallel to the z -axis. The line is 2 units in front of the yz plane and three units to the right of the xz plane.

