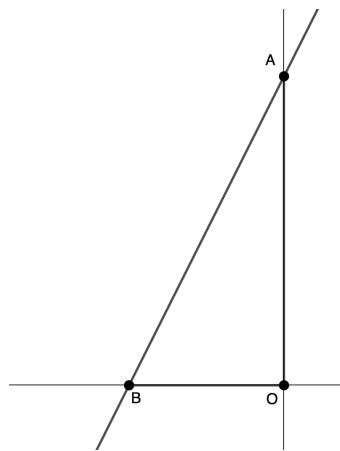


In the figure below, a triangle has points $O(0,0)$, $A(0,6)$, and $B(-3,0)$. Given this information, answer the questions below. For calculations requiring π , leave π as a variable.¹

- (1): Find the equation of the line that passes through AB .
- (2): Find the volume of the 3-dimensional figure created when OAB is rotated 360° about the y-axis.
- (3): Find the volume of the 3-dimensional figure created when OAB is rotated 360° about the x-axis.
- (4): Line l is a line that contains $(2,0)$ and is parallel to the y-axis. Find the volume of the 3-dimensional figure created when OAB is rotated 360° about line l .



¹Mie Prefecture