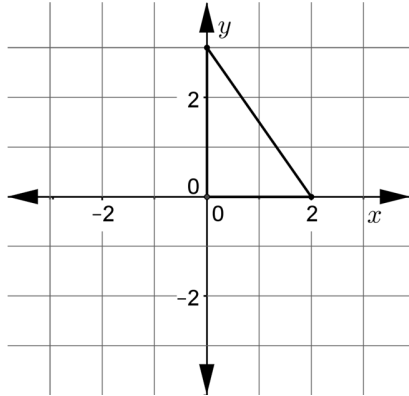
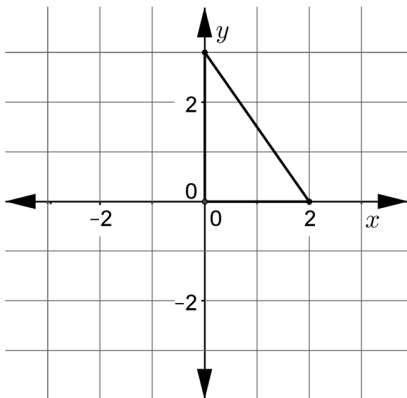


Name _____ Date _____

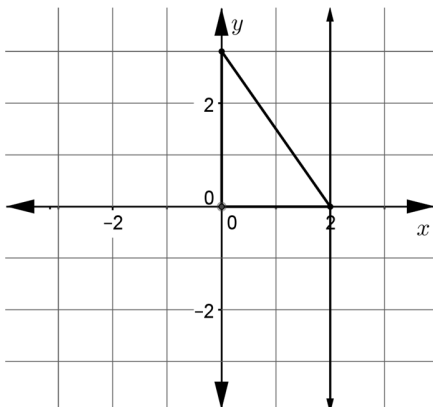
1. Describe in detail the solid formed by rotating a right triangle with vertices at $(0, 0)$, $(2, 0)$, and $(0, 3)$ about the vertical axis. Include the dimensions (height, length, width, radius, etc) of the solid in your description.



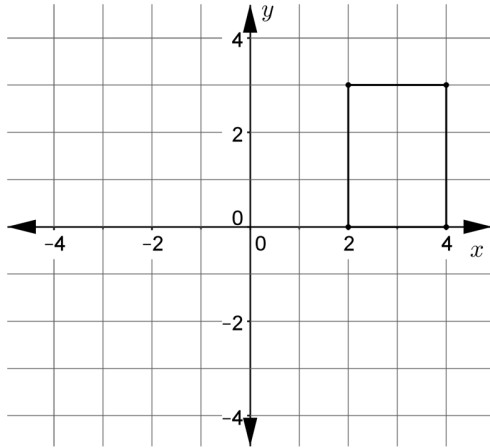
2. Describe in detail the solid formed by rotating a right triangle with vertices at $(0, 0)$, $(2, 0)$, and $(0, 3)$ about the horizontal axis. Include the dimensions (height, length, width, radius, etc) of the solid in your description.



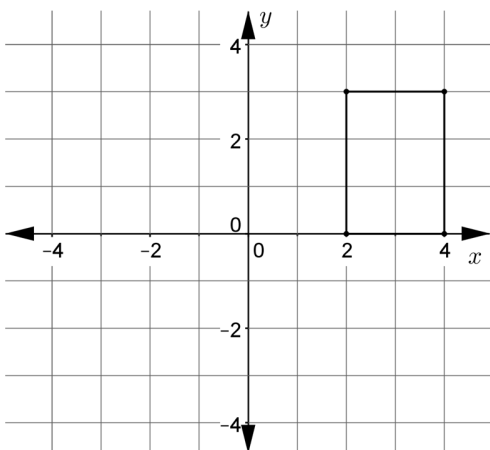
3. Imagine the solid formed by rotating the same right triangle about the line $x = 2$. Describe this solid in detail including its dimensions.



4. Describe in detail the solid formed by rotating a 2 x 3 rectangle with vertices $(2, 0)$, $(4, 0)$, $(2, 3)$ and $(4, 3)$ about the x -axis. Include the dimensions (height, length, width, radius, etc) of the solid in your description.



5. Describe in detail the solid formed by rotating a 2 x 3 rectangle with vertices $(2, 0)$, $(4, 0)$, $(2, 3)$, and $(4, 3)$ about the y -axis. Include the dimensions (height, length, width, radius, etc) of the solid in your description.



Answers:

- 1) Cone with radius 2 and height 2. The cone would point up.
- 2) Cone with radius 3 and height 2. The cone points to the right.
- 3) A cylinder with a cone shaped bowl hollowed out of it. The cylinder would have a radius of 2 and a height of 3. The cone void would point down and have a radius of 2 and height 3.
- 4) A cylinder with radius 3 and height of two. Its flat bases would be facing left and right.
- 5) A large cylinder donut. The large cylinder would have a radius of 4 and height of 3. The hole would be a cylinder of radius 2 and height of 3.