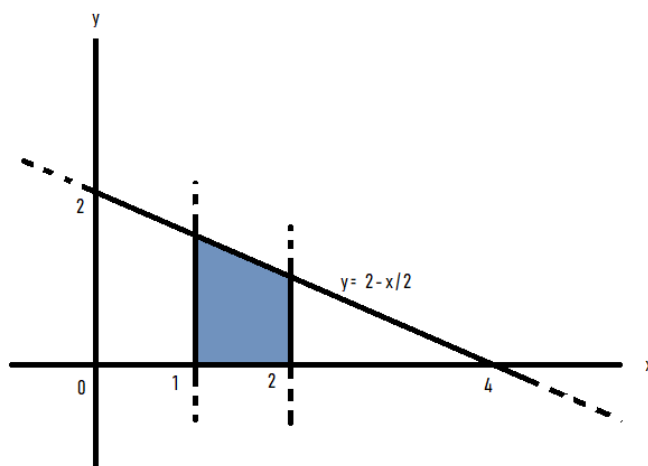
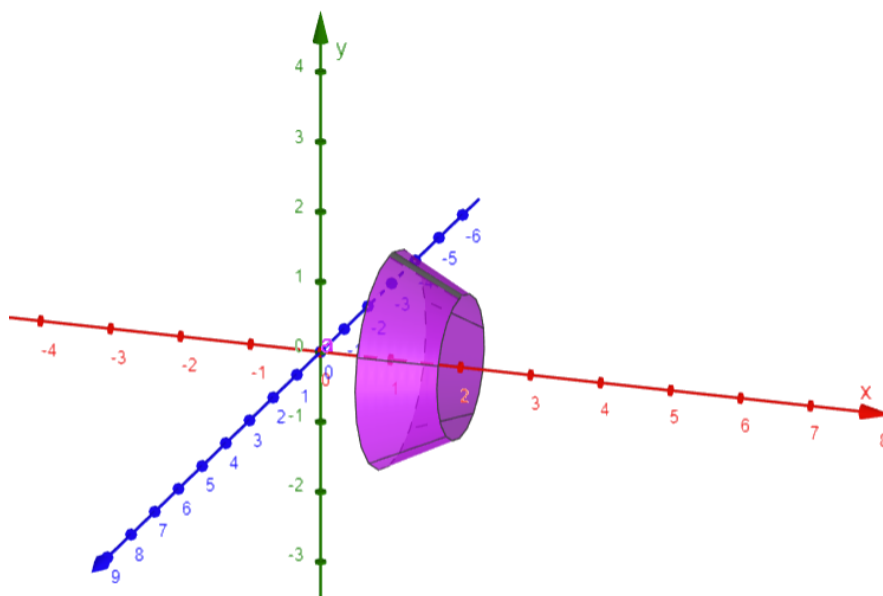


By: Amulya Baniya

The objective of this question is to calculate the volume of solid generated by revolution of a planar region. As a hint, the region bounded by the curves and the solid of revolution are given below:



According to the question, we are supposed to revolve the region around the x -axis. On Revolving around the x -axis, a solid of revolution is obtained.



Remember that, the volume of the solid of revolution formed by revolving the region around the x -axis is given by,

$V = \pi \int_a^b f^2(x) - g^2(x) dx$, where $f(x)$ **is the upper curve** and $g(x)$ **is the lower curve** and $x \in [a, b]$.

In this case, the upper function is $f(x) = 2 - \frac{x}{2}$ and the lower function is $g(x) = 0$ and $x \in [1, 2]$.