

# Assignment 4: Volume of Solid of Revolution

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Maple can be used to solve volume problems like volume of solid of revolution obtained by revolving the region bounded by the graphs of  $f(x, y)$ ,  $x = a$ ,  $x = b$ , and the  $x$ -axis about the  $x$ -axis or  $y$ -axis.

In this assignment you should find such kind of volume using Maple.

Let  $g(x, y) = x \sin^2(x)$ . Find the volume of the solid obtained by revolving the region bounded by the graphs of  $y = g(x)$ ,  $x = 0$ ,  $x = \pi$ , and the  $x$ -axis about the  $y$ -axis. Plot the function  $g(x)$  and the region obtained.

**Value of this assignment is 4 points** (1 point is equal to 1 percent of your final mark).