

USE SHELLS PLEASE. Show and attach all work. Make an appropriate sketch, set up an appropriate definite integral, show the correct integration. Use a graphing calculator to verify your answer.

1. Find the volume of the solid formed when the area bounded by the curve  $y = x(x - 3)^2$  and the x-axis (that one little “blip”) is rotated about the line  $x = 6$ .
2. Find the volume of the solid formed when the area bounded by the curves  $3x = y^2 + 2$  and  $3x - 5y + 2 = 0$  is rotated about the x-axis.
3. Find the volume of the solid formed when the area bounded by the curve  $y = \sqrt{9 - x^2}$ ,  $y = -3$ ,  $x = 0$  is rotated about the y-axis.