# Work-It-Out Day 7: Sections 6.1,6.2 and 6.3 <br> Math 142 - Spring 2016 

1. Find the area enclosed by the graphs of $y=4 x, y=24-8 x, y=2$.
2. Find the area enclosed by the graphs of $x=y^{2}-9, x=15-2 y$.
3. The base of a solid is a triangle bounded by the axes and the line $2 x+3 y=12$, and its cross setions perpindicular to the $y$-axis are equilateral triangles. Find it's volume.
4. Find an equation for the volume of a cone of height H whose base is an ellipse with semimajor axis A and semiminor axis B. (Note the area of an ellipse is $\pi a b$.
5. Find the volume of the solid obtained by rotating the region enclosed by the curves $y=x, y=4-x, y=(x-2)^{2}$ about the x -axis.
6. Find the volume of the solid obtained by rotating the region between the lines $y=2$, $x=0$, and $y=\sqrt{x}$ about the line $x=-2$.
