## Calculus Worksheet \#7 Unit 3 page 1

For each of the following problems you must
a. sketch a graph of the region described, and
b. use calculus to find the volume of the solid formed when this region is revolved about the $\mathbf{x}$-axis. (You should round to 3 significant figures where appropriate.)

1. the region bounded by the $x$-axis, the lines $x=2$ and $x=4$, and the curve $y=x^{2}$

2. the region bounded by the $x$-axis, the lines $x=0$ and $x=2$, and the curve $y=x^{2}-9$

3. the region bounded by the $x$-axis, the line $x=2$, and the line $2 x+3 y=12$


## Calculus Worksheet \#7 Unit 3 page 2

For each of the following problems you must
a. sketch a graph of the region described, and
b. use calculus to find the volume of the solid formed when this region is revolved about the $\mathbf{x}$-axis. (You should round to 3 significant figures where appropriate.)
4. the region bounded by the $x$-axis and the curve $y=x^{2}-4$

5. the region bounded by the $x$-axis and the curve $y=x^{3}+2 x^{2}$

6. the region bounded by the $x$-axis, the line $x=8$, and the curve $y=\sqrt[3]{x}$


