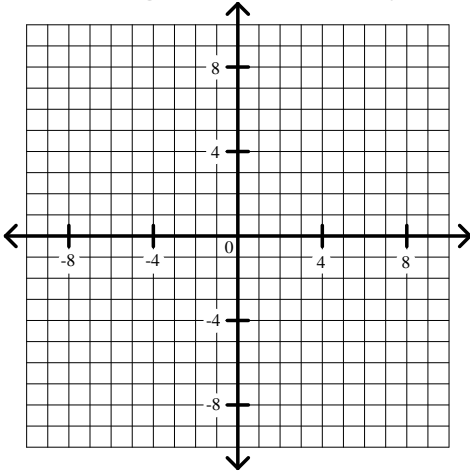


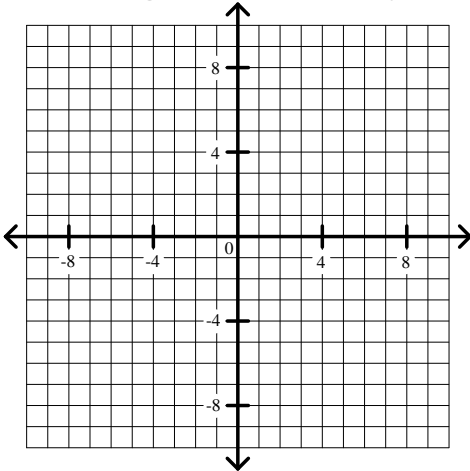
For each of the following problems you must

- 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 x-axis. (You should round to 3 significant figures where appropriate.)

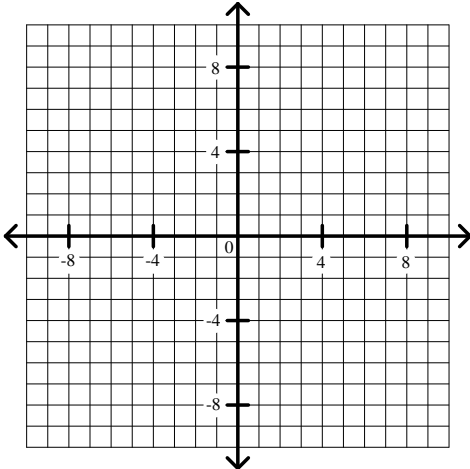
1. the region bounded by the x-axis and the curve  $y = x^2 + 4x$



2. the region bounded by the x-axis, the line  $x = -2$ , and the curve  $y = x^2$



3. the region bounded by the x-axis, the y-axis, and the line  $2x + y = 6$

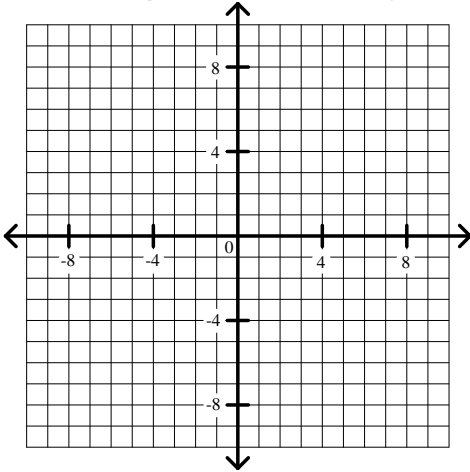


## Calculus Worksheet #8 Unit 3 page 2

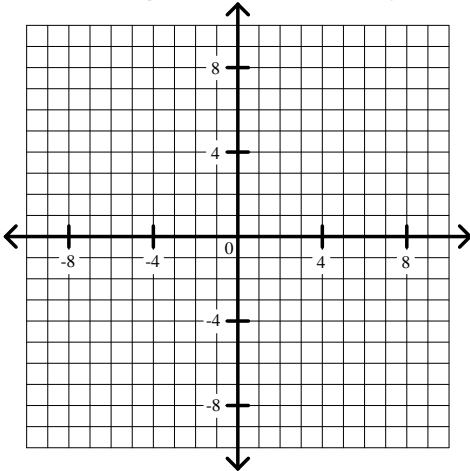
For each of the following problems you must

- sketch a graph of the region described, and
- use calculus to find the volume of the solid formed when this region is revolved about the x-axis. (You should round to 3 significant figures where appropriate.)

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



5. the region bounded by the x-axis, the line  $x = 4$ , and the curve  $x = y^2$



6. Find, by integration, the volume of the solid formed when the region sketched below is revolved about the x-axis. (Express your answer in terms of  $r$  and  $h$ .)

