Calculus   Class Worksheet #3   Unit 3   page 1   _____
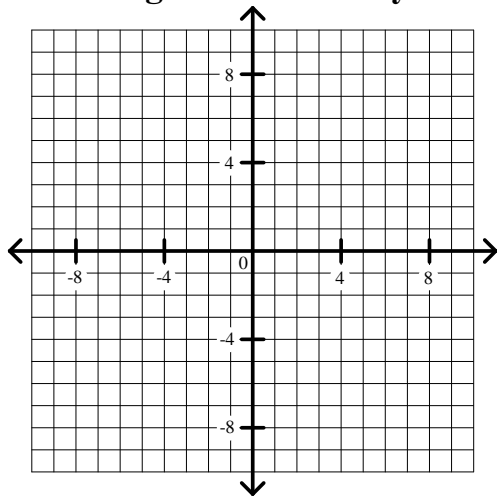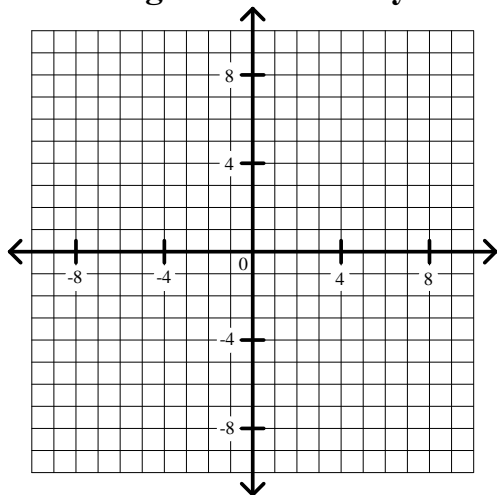
For each of the following problems you must
    a. sketch a graph of the region described, and
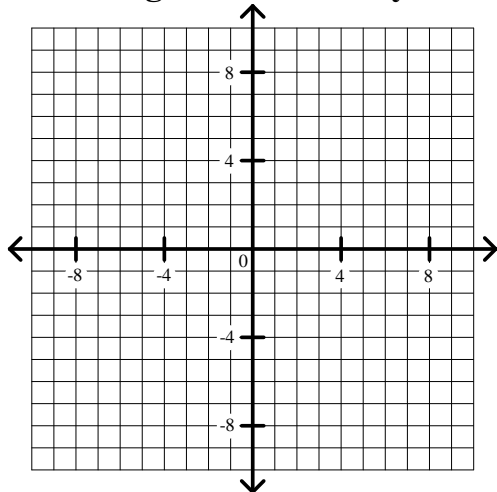   **b. use calculus to find the area of the region (exact value).**

1. the region bounded by the x-axis, the lines x = 1 and x = 3, and the curve $y = x^2 + 1$

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

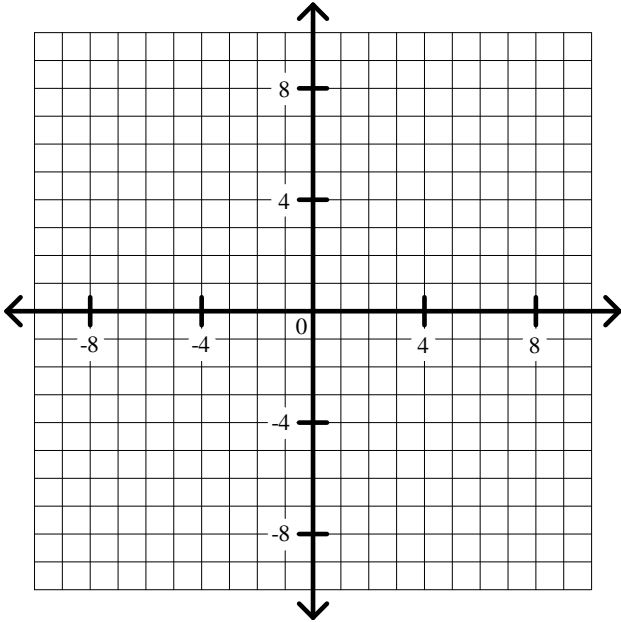**3. the region bounded by the x-axis and the curve $y = x^2 - 9$**

For each of the following problems you must
      a. sketch a graph of the region described, and
      b. use calculus to find the area of the region (exact value).

4. the region bounded by the x-axis, the line x = 3, and the curve $y = x^2$

5. the two regions bounded by the x-axis and the curve $y = x^3 - 4x$