Calculus   Worksheet #5   Unit 3   page 1   _____
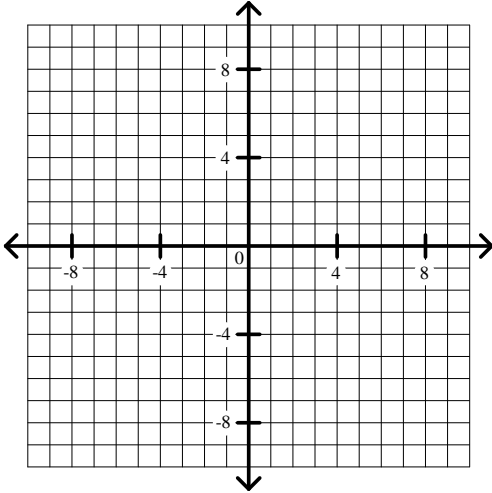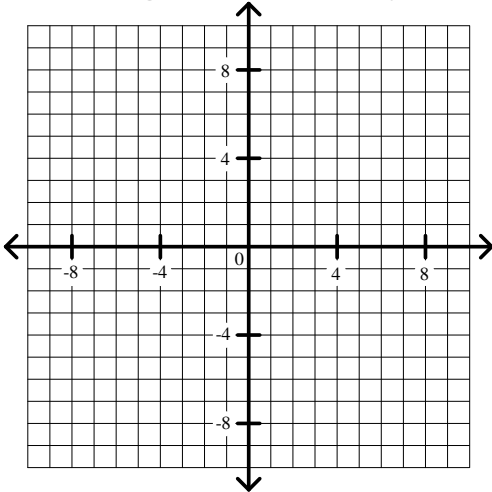
For each of the following problems you must
   a. sketch a graph of the region described, and
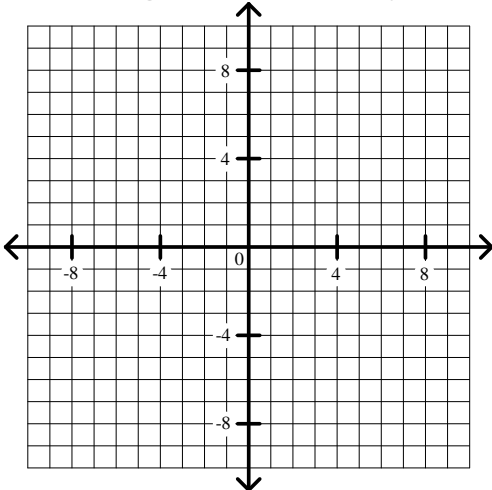   **b. use calculus to find the area of the region (exact value).**

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

2. the region bounded by the x-axis, the lines x = 1 and x = 4, and the curve $y = x^2 - 6x + 3$

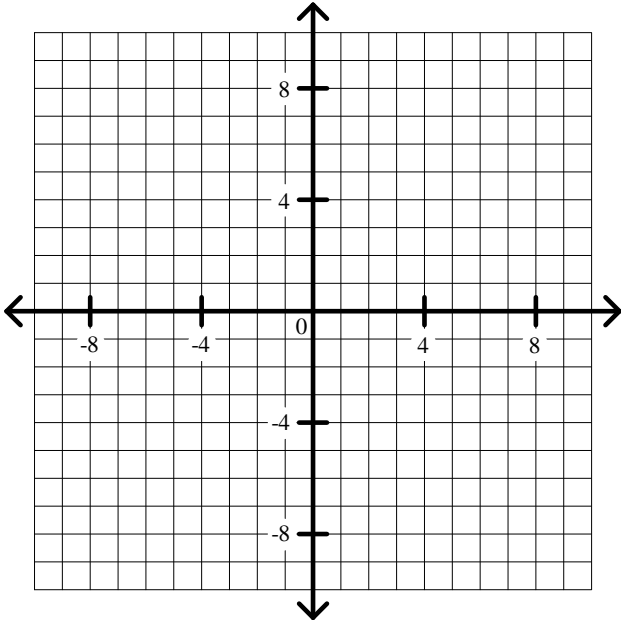**3. the region bounded by the x-axis and the curve $y = 8 + 2x - x^2$**

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 larger of the two regions bounded by the x-axis, the line x = -1 and the curve $y = x^2 - 9$

5. the two regions bounded by the x-axis and the curve $y = x^3 + x^2 - 6x$