Math 108, Business Calculus Name _____

Homework #1   **Due Wednesday, Jan. 28, 2009, at the beginning of class**
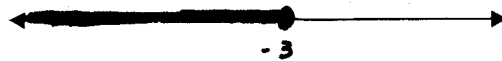
1. Use inequality or interval notation to describe the intervals below.

   a)

   b)

2. Express each of the following as a single term, eliminating all fractions. (Your answer should look like a single base raised to a single exponent.) Do not evaluate (multiply out) and do not use a calculator. Show all steps to your work.

   a) $\dfrac{3^4(3^{-3})}{(3^5)^2}$

   b) $\dfrac{\sqrt[3]{2}}{2^{-3}}$

   c) $\dfrac{4 \cdot 16^{\frac{3}{4}}}{32}$

3. Solve the following by factoring.

   a) $x^2 + 3x - 4 = 0$

   b) $2x^2 - 6x + 4 = 0$

   c) $x^3 + 5x^2 + 4x = 0$

4. Solve the following.

   a) $x^2 + 2x - 5 = 0$

   b) $2x^2 + 4x = -1$