Name:

HW 1: §A.2-A.4

Complete the following problems to the best of your ability. **SHOW ALL OF YOUR WORK.** Unshown work will not be graded. You may use a calculator.

1. Write the following sets in interval notation and graph them on a number line.

    (a) $\{x : x \leq 3\}$

    (b) $\{x : -2 \leq x < 4\}$

    (c) All real numbers between but not including 2 and 10.

2. Find the intersection of the intervals that are solutions for problems 1a and 1b.

3. Evaluate the following expressions involving absolute value.

    (a) $|6 - 3|$

    (b) $|-4 + 1|$

    (c) $|4 - (-3)|$

4. Evaluate or simplify the following expressions.

   (a) $\left(\frac{2}{3}\right)^2$

   (b) $2^3 \cdot 2^3$

   (c) $(x^2 y^4)^2$

   (d) $\left(\frac{16}{25}\right)^{1/2}$

   (e) $\left(\frac{x^{-2} y^4}{2z^2}\right)^2$

Optional Problems:
A.2: All
A.3: All
A.4: All