Homework #5: Due Friday, October 18

Name_____

Buckley or Gietzen

1. Find the <u>prime factorization</u> of the following numbers. (Write your answers *with exponents.*)

      a. 60   **b.** 28

Prime Factorization: _____   Prime Factorization: _____

2. a. List ALL the factors of 48: ____ ____ ____ ____ ____ ____ ____ ____ ____ ____

    b. List ALL the factors of 32: ____ ____ ____ ____ ____ ____

    c. What is the <u>greatest</u> common factor of 48 and 32? ____

    d. What is <u>another</u> common factor of 48 and 32? ____

3. a. List the first six multiples of 12: ____ ____ ____ ____ ____ ____

    b. List the first six multiples of 8: ____ ____ ____ ____ ____ ____

    c. What is the <u>least</u> common multiple of 12 and 8? ____

    d. What is <u>another</u> common multiple of 12 and 8? ____

4. Write each problem below out as a multiplication problem, and then find the product.

    a. 3^4 = <u>3 x 3 x 3 x 3</u> = <u>81</u>

    b. 8^2 = _____ = _____

    c. 2^3 = _____ = _____

    d. 10^5 = _____ = _____

    e. 12^2 = _____ = _____

5. Label each of the following as True (T) or False (F), then <u>show work</u> or <u>explain</u> to prove your answer:

    a. _____ 12 is a common factor of 20 and 36.

    b. _____ The GCF of two prime numbers is always 1.

    c. _____ 25, 200, and 75 are all multiples of 25.

    d. _____ The *prime* factors of 99 are 11 and 9.