Factors and Prime Factorization

Prime Number - An integer greater than one whose only factors are one and itself.

Composite Number - An integer greater than one that has factors other than one and itself.

Factors - Numbers that divide evenly into a number.

Prime Factorization - Writing a number as a product of prime numbers.

Directions: Write all the factors of the number. If the number is composite, write the prime factorization.

1. 144

2. 87

3. 504

4. 53

Directions: Factor the monomial.

5. $24ab$

6. $4x^3y^2$

7. $72m^2$

Directions: List the factors of the monomial.

8. $60a^2$

9. $56xy^2$

10. What is the prime factorization of 36?

   a) $1 \times 2 \times 2 \times 3 \times 3$

   b) $2 \times 2 \times 3 \times 3$

   c) $2 \times 3 \times 3 \times 3$

   d) $3 \times 3 \times 4$