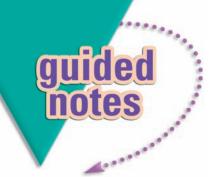
NAME

Module 12	Simplifying Algebraic Expressions
	by Factoring Polynomials
Lesson 1	Factoring by Removing the Greatest
	Common Factor



Lesson Objectives

- Identify the GCF of a polynomial.
- Factor polynomials by removing the GCF.

Factoring a polynomial is rewriting the polynomial as a

product of simpler expressions.

The Distributive Property states that

a(b + c) = ab + ac

It can also be written as ab + ac = (a(b + c))

When factoring a polynomial, the first thing to be done is to factor out the

greatest common monomial factor.

The greatest common monomial factor is the common factor that has

the largest **numerical** factor and the highest

degree in each variable.

(1) Factor: 6x + 12

6(x + 2)

- **2** Factor: $5x^4 15x^2 10$
 - $5(x^4 3x^2 2)$
- **(3)** Factor, if possible: $a^3 b^2$

No common monomial factor or no GCF



(4) Factor: $8x^2y^2 - 12x^4y^3$

 $4x^2y^2(2 - 3x^2y)$

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