Lesson 28
Factoring Completely

FACTORING COMPLETELY

1. Always factor out a GCF first, if possible.
2. Count the number of terms.
    - If there are 2 terms (binomial), look for a difference of squares pattern.
    - If there are 3 terms (trinomial), look for a perfect square trinomial OR use the product/sum method.

Factor the following polynomials completely.

1) $x^4 - 64$

2) $8x^6 + 32x^2$

3) $2x^2 + 50 - 20x$

4) $3x^4 - 48$

5) $12x^2 - 40x - 32$

6) $2a^4 - 11a^3 + 12a^2$

7) $48a^3 - 243ab^2$

8) $12x^3 - 36x^2 + 27x$

9) $14x^4 - 35x^3 - 21x^2$

10) $a^3b^2 + 4a^2b^3 + 3ab^4$

11) $x^3 + 3x^2 - 4x - 12$