
Lesson 4: Factoring General Polynomials

- Multiply monomials
 - Distributive law: $a \cdot (b \pm c) = a \cdot b \pm a \cdot c$
 - The product of a monomial and a polynomial
 - The product of two polynomials
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Multiply each of the following. Show all steps.

1. $(2x - 1)(x - 8)$

2. $(t - 3)^2$

3. $(3y + 2)(y - 5)$

4. $(2p - 7)^2$

VII. FACTOR BY GROUPING

Factor completely using the factor by group technique:

5. $x^2 - x + 3x - 3$

6. $2m^2 - 6m + 5m - 15$

Lesson 4: Factoring General Trinomials of the type $ax^2 + bx + c$

- The FOIL Method to factoring: $ax^2 + bx + c$
 - Tips for factoring $ax^2 + bx + c$ with FOIL
 - The AC Method to factoring: $ax^2 + bx + c$
 - Algebraic and graphical approach to solving $ax^2 + bx + c = 0$
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Solve each of the following quadratic equations using the zero product property:

7. $n^2 + 3n - 54 = 0$

8. $3x^2 + x - 4 = 0$

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9. $w^2 = -18w$

10. $4w^2 + 20w + 25 = 0$