Chapter 1.2.8 - 1.2.9: Factoring Special Products and General Strategy for Factoring Polynomials

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Spring 2024

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Chapter 1.2.8 - 1.2.9: Factoring Special Prod

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Recall, we learned a special rule about the product of conjugates (a+b)(a-b). $(a+b)(a-b) = a^2 - b^2$

We called this the **Product of Conjugates**. The reverse of this rule will help us to factor binomial in which two squares are being subtracted.

$$a^2 - b^2 = (a+b)(a-b)$$

We call this the Difference of Perfect Squares.

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Examples: Factor.

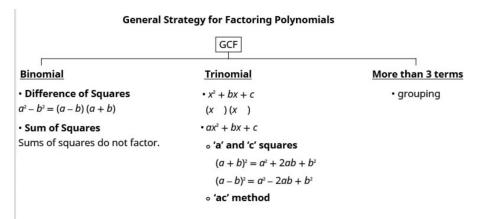
- $121x^2 25y^2$
- *x*⁶ − 9
- $-49a^4b^8 + 16a^2b^4$
- On Your Own: $81u^2 36v^2$

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General Strategy for Factoring Polynomials

Let's summarize a general strategy for factoring polynomials.



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Chapter 1.2.8 - 1.2.9: Factoring Special Prod

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Factor completely.

• $7xy^5 - 7xy$ • $4x^2 + 8bx - 4ax - 8ab$ • $40x^2y + 44xy - 24y$ • $8x^4 - 32x^3 - 40x^2$ • $u^8 + 2u^4 + 1$

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