

# 03 Topic: Factoring

Content Area: **Mathematics**  
Course(s): **Algebra 2**  
Time Period: **Semester 1**  
Length: **2-3 weeks**  
Status: **Published**

## Standards

---

MA.K-12.7	Look for and make use of structure.
MA.A-SSE.A.2	Use the structure of an expression to identify ways to rewrite it. For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$ , thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$ .
MA.A-SSE.A.1a	Interpret parts of an expression, such as terms, factors, and coefficients.
MA.A-SSE.B.3	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.
MA.A-SSE.B.3a	Factor a quadratic expression to reveal the zeros of the function it defines.

## Enduring Understandings

---

1. Mathematics is a language consisting of symbols and rules.
2. The same mathematical ideas can be represented concretely or symbolically.
3. There can be different strategies to solve a problem, but some are more effective and efficient than others.

## Essential Questions

---

How will students decide which method to use to factor and solve polynomials?

How will students solve quadratic equations and inequalities?

## Knowledge and Skills

---

Use appropriate factoring methods

Factor with the greatest common factor

Factor quadratic trinomials with a leading coefficient of one and not one

Special factoring: difference of squares, difference of cubes, sum of cubes, perfect square trinomials

Factor by grouping

Solve quadratic equations and inequalities

## **Transfer Goals**

---

Using mathematical reasoning and strategic thinking can allow for practical solutions of many problems.

Often unique vocabulary and implementation methods are needed to solve problems.

## **Resources**

---

1. McDougal/Littell - Algebra & Trigonometry Structure & Method Book 2
2. Aufmann/Barker/Lockwood - Intermediate Algebra with Applications Sixth Edition
3. Houghton/Mifflin/Harcourt - On Core Mathematics Algebra 2
4. Holt - Algebra 2 with Trigonometry
5. Larson/Boswell - Big Ideas Math: Algebra 2 Texas Edition
6. [Khan Academy](#)
7. [PurpleMath](#)
8. [KutaSoftware](#)
9. [CK-12](#)
10. [Quizlet](#)
11. [Albert I/O](#)
12. [Desmos](#)
13. [Problem Attic](#)

