

PCSD Lesson Planning Template

<u>Grade Level</u> 9th Algebra I		<u>Teacher/Room:</u> S. Pinson/Room 182		Week of: January 30 – February 3, 2017	
Unit Vocabulary: see attached					
Instructional Strategies Used: direct instruction, independent study, interactive instruction, partners					
<u>Day 1</u>		<u>Day 2</u>		<u>Day 3</u>	
GSE Standard(s): MGSE9-12.A.APR.1 Add, subtract, and multiply polynomials.		GSE Standard(s): MGSE9-12.A.APR.1 Add, subtract, and multiply polynomials; understand that polynomials form a system analogous to the integers in that they are closed under these operations.		GSE Standard(s): MGSE9-12.A.APR.1 Add, subtract, and multiply polynomials; understand that polynomials form a system analogous to the integers in that they are closed under these operations.	
EQ Question: How are polynomial operations related to operations in the real number system?		EQ Question: How are polynomial operations related to operations in the real number system?		EQ Question: How are polynomial operations related to operations in the real number system?	
Mini Lesson: 24 Activating Strategies: Polynomial Anticipation Guide Lesson: Adding and Subtracting Polynomials 1. Intro to polynomials (vocabulary) 2. Notes on adding and subtracting polynomials 3. Assignment Resource/Materials: Powerpoint, worksheets		Mini Lesson: Computer Lab Activating Strategies: Multiplying Polynomials Anticipation Guide Lesson: Multiplying Polynomials 1. Guided Notes – Distributive Property 2. Guided Practice 3. Classwork Resource/Materials: Powerpoint, Worksheets, logins		Mini Lesson: Person Puzzle– (PBIS) Multiplying Radicals Malala Yousafzai) Activating Strategies: How can we multiply (x + 2)(x + 1)? Lesson: Multiplying Polynomials 1. Guided Notes – FOIL, repeat distributive 2. Guided Practice 3. Classwork Resource/Materials: Powerpoint, Worksheets	
Mini Lesson: Computer Lab Activating Strategies: Graphic Organizer for Polynomials Lesson: Operations with Polynomials 1. Review the operations of adding, subtracting, and multiplying polynomials 2. Guided Practice 3. Assignment-partners 4. Quiz over radicals and polynomials Resource/Materials: Powerpoint, Worksheets, quiz		Mini Lesson: Computer Lab Activating Strategies: notes glued in interactive notebooks Activating Strategies: Multiply Polynomials by Distributive Property Lesson: Factoring GCF 1. Guided Notes 2. Guided Practice 3. Quiz – over Weekly Review Sheet and Daily Math Reviews Resource/Materials: Powerpoint, Worksheets, quiz		Mini Lesson: notes glued in interactive notebooks Activating Strategies: Multiply Polynomials by Distributive Property Lesson: Factoring GCF 1. Guided Notes 2. Guided Practice 3. Quiz – over Weekly Review Sheet and Daily Math Reviews Resource/Materials: Powerpoint, Worksheets, quiz	
Differentiation: <i>Content/Process/Product:</i> Guided Notes <i>Grouping Strategy:</i> <i>Assessment:</i>		Differentiation: <i>Content/Process/Product:</i> Guided Notes, Computer Lab - USATestPrep <i>Grouping Strategy:</i> <i>Assessment:</i>		Differentiation: <i>Content/Process/Product:</i> graphic organizer, Computer Lab - USATestPrep <i>Grouping Strategy:</i> partners <i>Assessment:</i> teacher observation	
Assessment : <i>Formative:</i> thumbs up/down, monitoring classwork <i>Summative:</i>		Assessment : <i>Formative:</i> thumbs up/down, monitoring classwork, USATestPrep <i>Summative:</i>		Assessment : <i>Formative:</i> thumbs up/down, monitoring classwork, quiz <i>Summative:</i>	
Homework: WS packet – Adding and Subtracting Polynomials, Find the perimeter of the polygon, & Vocab, WS Day 3		Homework: Multiplying Using Distributive Property WS		Homework: WS – Operations with Polynomials	
Homework: WS-Multiplying Binomials and Polynomials, WS Day 6 Multiplying Polynomials		Homework: WS – Operations with Polynomials		Homework: none	

- **Complete factorization over the integers.** Writing a polynomial as a product of polynomials so that none of the factors is the number 1, there is at most one factor of degree zero, each polynomial factor has degree less than or equal to the degree of the product polynomial, each polynomial factor has all integer coefficients, and none of the factor polynomial can be written as such a product.
- **Completing the square.** Completing the Square is the process of converting a quadratic equation into a perfect square trinomial by adding or subtracting terms on both sides.
- **Difference of two squares.** A squared (multiplied by itself) number subtracted from another squared number. It refers to the identity $a^2 - b^2 = (a + b)(a - b)$ in elementary algebra.
- **Discriminant of a quadratic equation.** The discriminant of a quadratic equation of the form $ax^2 + bx + c = 0$, $a \neq 0$, is the number $b^2 - 4ac$.
- **Horizontal shift.** A rigid transformation of a graph in a horizontal direction, either left or right.
- **Perfect square trinomial.** A trinomial that factors into two identical binomial factors.
- **Quadratic equation.** An equation of degree 2, which has at most two solutions.
- **Quadratic function.** A function of degree 2 which has a graph that “turns around” once, resembling an umbrella-like curve that faces either right-side up or upside down. This graph is called a parabola.
- **Root.** The x-values where the function has a value of zero.
- **Standard form of a quadratic function.** $ax^2 + bx + c$
- **Vertex.** The maximum or minimum value of a parabola, either in terms of y if the parabola is opening up or down, or in terms of x if the parabola is opening left or right.
- **Vertex form of a quadratic function.** A formula for a quadratic equation of the form $f(x) = a(x - h)^2 + k$, where a is a nonzero constant and the vertex of the graph is the point (h, k) .