PCSD Lesson Planning Template

Grade Level 11th Advanced Algebra A	**Teacher/Room**: L. Weyman/S. Miller Room 183			Week of: May 8 – May 12, 2017
Unit Vocabulary: see attached				
Instructional Strategies Used: direct instruction, independent study, interactive instruction, partners				
Day 1	**Day 2**	**Day 3**	**Day 4**	**Day 5**
GSE/GPS Standard(s): **MGSE9-12.A.APR.6** Rewrite simple rational expressions in different forms.	**GSE/GPS Standard(s)**: **MGSE9-12.A.APR.6** Rewrite simple rational expressions in different forms.	**GSE/GPS Standard(s)**: **MGSE9-12.A.APR.6** Rewrite simple rational expressions in different forms.	**GSE/GPS Standard(s)**: Rewrite simple rational expressions in different forms.	**GSE/GPS Standard(s)**: Rewrite simple rational expressions in different forms.
EQ Question: How can we extend arithmetic properties and processes to algebraic expressions?	**EQ Question**: How can we extend arithmetic properties and processes to algebraic expressions?	**EQ Question**: How can we extend arithmetic properties and processes to algebraic expressions?	**EQ Question**: How can we extend arithmetic properties and processes to algebraic expressions?	**EQ Question**: How can we extend arithmetic properties and processes to algebraic expressions?
Mini Lesson: Review Problems **Activating Strategies:** Dividing Fractions **Lesson**: Reviewing Simplifying, Multiplying and Dividing Rational Expressions **Resource/Materials:** Power point	**Mini Lesson:** Computer Lab **Activating Strategies:** Adding Fractions **Lesson:** Adding Rational Expressions (Like Denominators) 1. Powerpoint with Guided Notes 2. Guided Practice 3. Assignment **Resource/Materials:** Power point, guided notes, worksheets	**Mini Lesson:** Review Questions **Activating Strategies:** Order of Operations with Fractions **Lesson:** Mixture of Operations with Rational Expressions 1. Powerpoint with guided practice (white Boards) 2. Assignment **Resource/Materials:** Power point	**Mini Lesson:** Computer Lab **Activating Strategies:** Adding Fractions with Unlike Denominators **Lesson:** Adding Rational Expressions with Unlike Denominators (continued) 1. Go over Friday's Quiz 2. Powerpoint with guided notes 3. Guided Practice 4. Classwork (Partners) **Resource/Materials:** Power point, guided notes	**Mini Lesson:** Quiz: operations with rational expressions **Activating Strategies:** Order of Operations with Fractions **Lesson:** Mixture of Operations with Rational Expressions and Complex Fractions 1. Powerpoint with guided practice (white Boards) 2. Assignment **Resource/Materials:** Power point, logins
Differentiation: *Content/Process/Product:* Guided Notes, Guided Practice with white boards *Grouping Strategy:* *Assessment:*	**Differentiation:** *Content/Process/Product:* guided notes, guided practice with white boards, USATestPrep *Grouping Strategy:* *Assessment:*	**Differentiation:** *Content/Process/Product:* Guided Notes, Guided Practice with white boards *Grouping Strategy:* *Assessment:*	**Differentiation:** *Content/Process/Product:* Guided Notes *Grouping Strategy:* Partners *Assessment:* Friday's Quiz	**Differentiation:** *Content/Process/Product:* White Boards, USATestPrep *Grouping Strategy:* *Assessment:* random
Assessment : *Formative:* thumbs up/down, monitoring classwork, whiteboards *Summative:*	**Assessment :** *Formative:* thumbs up/down, monitoring classwork, whiteboards *Summative:*	**Assessment :** *Formative:* thumbs up/down, monitoring classwork, whiteboards *Summative:*	**Assessment :** *Formative:* thumbs up/down, monitoring classwork *Summative:*	**Assessment :** *Formative:* thumbs up/down, monitoring classwork, quiz *Summative:*
Homework: WS Dividing Rational Expressions	**Homework:** WS Adding Rational Expressions w/ Like Denominators	**Homework:** WS Operations with Rational Expressions	**Homework:** WS Adding and Subtracting Rational Exp	**Homework:** WS Order of Operations with Rat Expressions

Resources and Reflective Notes:

Binomial Expression: An algebraic expression with two unlike terms.

Coefficient: A number multiplied by a variable.

Degree: the greatest exponent of its variable.

End Behavior: the value of f(x) as x approaches positive and negative infinity.

Fundamental Theorem of Algebra: every non-zero single-variable polynomial with complex coefficients has exactly as many complex roots as its degree, if each root is counted up to its multiplicity.

Multiplicity: the number of times a root occurs at a given point of a polynomial equation

Pascal's Triangle: an arrangement of the values of ${}_nC_r$ in a triangular pattern where each row corresponds to a value of n.

Polynomial function: A polynomial function is defined as a function, $f(x)= a_o x^{n} + a_1 x^{n-1} + a_2 x^{n-2} + \ldots + a_{n-2} x^{2} + a_{n-1} x^{1} + an$, where the coefficients are real numbers.

Rational Root Theorem: a theorem that provides a complete list of all possible rational roots of a polynomial equation. It states that every rational zero of the polynomial equation $f(x)= a_o x^{n} + a_1 x^{n-1} + a_2 x^{n-2} + \ldots + a_{n-2} x^{2} + a_{n-1} x^{1} + an$,where all coefficients are integers, has the form $\frac{p}{q} = \frac{factors\ of\ constant}{factors\ of\ leading\ coefficient}$.

Remainder Theorem: states that the remainder of a polynomial f(x) divided by a linear divisor (x – c) is equal to f(c).

Roots: solutions to polynomial equations.

Standard Form of a Polynomial: To express a polynomial by putting the terms in descending exponent order.

Synthetic Division: Synthetic division is a shortcut method for dividing a polynomial by a linear factor of the form (x – a). It can be used in place of the standard long division algorithm.

Trinomial: An algebraic expression with three unlike terms.

Variable: A letter or symbol used to represent a number.

Zero: If f(x) is a polynomial function, then the values of x for which f(x) = 0 are called the zeros of the function. Graphically, these are the x intercepts.