# Hattiesburg Public School District
# Algebra I Mathematics Units
# 2015 – 2016

| Unit 1: Expression with Algebraic Components | **Time Frame:** 2 Weeks (Aug 6-21, 2015) |
|---|---|
| **Content Standards** | **Standards for Mathematical Practice** |
| **Major Standards**<br>**A-APR.A.1** Understand that polynomials form a system analogous to the integers, namely they are closed under the operations of addition, subtraction, ~~and multiplication~~; add, subtract, ~~and multiply polynomials.~~<br>**A-SSE.A.1** Interpret expressions that represent a quantity in terms of its context<br>a. Interpret parts of an expression, such as terms, factors, and coefficients.<br>b. Interpret complicated expressions by viewing one or more of their parts as a single entity. For example, interpret $P(1+r)^n$ as the product of P and a factor not depending on P.<br>**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 $(x^2 - y^2)(x^2 + y^2)$.~~ | (1) Make sense of problems and persevere in solving them.<br>(2) Reason abstractly and quantitatively.<br>(3) Construct viable arguments and critique the reasoning of others.<br>(4) Model with mathematics.<br>(5) Use appropriate tools strategically.<br>(6) Attend to precision.<br>(7) Look for and make use of structure.<br>(8) Look for and express regularity in repeated reasoning.<br><br>****MPs taken from the Flip Book by McGraw Hill.**** |
| **Supporting Standards**<br>**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.*<br>c. Use the properties of exponents to transform expressions ~~for exponential functions. For example the expression $1.15^t$ can be rewritten as $[1.151/12]^{12t} \approx 1.01212^t$ to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.~~ | |
| **Additional Standards:**<br>**N-RN.B.3** Explain why the sum or product of two rational number is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational. | |
| **Pre-requisite Standards:**<br>6.EE.A.2b<br>6.EE.A.3 | |

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| 6.EE.A.4<br>7.EE.2<br>7.EE.A.1<br>8.EE.1<br>8.EE.A.1<br>8.NS.A.1 | | | | |
| **Lesson 1** | **Lesson 2** | **Lesson 3** | **Lesson 4** | **Lesson 5** |
| Rational vs. Irrational Numbers (3 days) | Variables and Expressions (1 day) | Evaluating Simple Algebraic Expressions (1 day) | Combining Like Terms (1 day) | Properties of Exponents (2 days) |
| **Lesson 6** | **Performance Task** | **Performance Task** | | |
| Generating Equivalent Expressions (2 days) | Interpreting Expressions with MathShell | Delivery Trucks<br>Standard Ref<br>www.iilustrativemathematics.org/content-standards/HSA/SSE/A/1/tasks/531 | | |