

| GSE Algebra II     |                        |                         |                      |                      |                      |                          |  |  |  |  |  |
|--------------------|------------------------|-------------------------|----------------------|----------------------|----------------------|--------------------------|--|--|--|--|--|
| Math               |                        |                         |                      |                      |                      |                          |  |  |  |  |  |
| 4 X 4 Block        |                        |                         |                      |                      |                      |                          |  |  |  |  |  |
| Unit 1             | Unit 2                 | Unit 3                  | Unit 4               | Unit 5               | Unit 6               | Unit 7                   |  |  |  |  |  |
| 2 Weeks            | 2 Weeks                | 2.5 Weeks               | 4 Weeks              | 2.5 Weeks            | 2.5 Weeks            | 2.5 Weeks                |  |  |  |  |  |
| Quadratics         | <b>Operations with</b> | Polynomial              | Rational and         | Exponential and      | Mathematical         | Inferences and           |  |  |  |  |  |
| Revisited          | Polynomials            | Functions               | Radical              | Logarithms           | Modeling             | <b>Conclusions from</b>  |  |  |  |  |  |
|                    |                        |                         | Relationships        |                      |                      | Data                     |  |  |  |  |  |
| Perform arithmetic | Perform arithmetic     | Use complex             | Rewrite rational     | Write expressions in | Write expressions in | Summarize,               |  |  |  |  |  |
| operations with    | operations on          | numbers in              | expressions          | equivalent forms to  | equivalent forms to  | represent, and           |  |  |  |  |  |
| complex numbers    | polynomials            | polynomial identities   | MGSE9-               | solve problems       | solve problems       | interpret data on a      |  |  |  |  |  |
| MGSE9-             | MGSE9-                 | and equations           | 12.A.APR.7           | MGSE9-               | MGSE9-               | single count or          |  |  |  |  |  |
| 12.N.CN.1          | 12.A.APR.1             | MGSE9-12.N.CN.9         | (Rewrite rational    | 12.A.SSE.3           | 12.A.SSE.4           | measurement              |  |  |  |  |  |
| (Complex           | (Add, subtract &       | (Fundamental            | expressions)         | (Equivalent          | (Derive formula for  | variable                 |  |  |  |  |  |
| numbers)           | multiply               | Theorem of Algebra)     |                      | expressions)         | sum of finite        | MGSE9-12.S.ID.2          |  |  |  |  |  |
| MGSE9-             | polynomials)           | × .                     | Write expressions in | MGSE9-               | geometric series)    | (Shape and data          |  |  |  |  |  |
| 12.N.CN.2          | MGSE9-                 | Interpret the structure | equivalent forms to  | 12.A.SSE.3c          | MGSE9-               | distribution)            |  |  |  |  |  |
| (Complex           | 12.A.APR.5             | of expressions          | solve problems       | (Properties of       | 12.A.CED.1           | MGSE9-12.S.ID.4          |  |  |  |  |  |
| numbers &          | (Binomial              | MGSE9-12.A.SSE.1        | MGSE9-               | exponents)           | (Create equations    | (Fit to a normal         |  |  |  |  |  |
| properties)        | Theorem)               | MGSE9-12.A.SSE.1a       | 12.A.CED.1           |                      | & inequalities-1     | distribution)            |  |  |  |  |  |
| MGSE9-             |                        | MGSE9-12.A.SSE.1b       | (Create equations &  | Analyze functions    | variable)            | <b>XX 1</b> . <b>1</b> 1 |  |  |  |  |  |
| 12.N.CN.3          | Rewrite rational       | (Interpret              | inequalities-1       | using different      | MGSE9-               | Understand and           |  |  |  |  |  |
| (Conjugate of      | expressions            | expressions; Interpret  | variable)            | representations      | 12.A.CED.2           | evaluate random          |  |  |  |  |  |
| complex numbers)   | MGSE9-                 | parts & terms of        | MGSE9-               | MGSE9-12.F.IF.7      | (create equations &  | processes                |  |  |  |  |  |
| <b>X</b> X 1       | 12.A.APR.6             | expressions)            | 12.A.CED.2           | (Graph functions)    | inequalities-2       | underlying               |  |  |  |  |  |
| Use complex        | (Rewrite rational      | MGSE9-12.A.SSE.2        | (Create equations    | MGSE9-12.F.IF./e     | variables)           | statistical              |  |  |  |  |  |
| numbers in         | expressions)           | (Equivalent             | & inequalities-2     | (Graph exponential   | MGSE9-               | experiments              |  |  |  |  |  |
| polynomial         |                        | expressions)            | variables)           | & logarithmic        | 12.A.CED.3           | MGSE9-12.S.IC.1          |  |  |  |  |  |
| identities and     | Build a function       | TT 1 / 1/1              |                      | functions)           | (Represent           | (Interences from a       |  |  |  |  |  |
| equations          | that models a          | Understand the          | Understand solving   | MGSE9-12.F.IF.8      | constraints)         | random sample)           |  |  |  |  |  |
| MGSE9-             | relationship           | relationship between    | equations as a       | (Write a function)   | MGSE9-               | MGSE9-12.S.IC.2          |  |  |  |  |  |
| 12.N.CN.7          | between two            | zeros and factors of    | process of reasoning | MGSE9-12.F.IF.8b     | 12.A.CED.4           | (Using simulations)      |  |  |  |  |  |
|                    | quantities             | polynomials             | and explain the      | (Interpret           | (Rearrange           |                          |  |  |  |  |  |
|                    | MGSE9-12.F.BF.1        | MGSE9-12.A.APR.2        | reasoning            | expressions)         | formulas)            |                          |  |  |  |  |  |

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| (Solvo quadratica   | (Write a function)              | (Pomoindor             | MCSEO 12 A DEL2      |                     | Poprocont and colvo  | Maka informas     |
|---------------------|---------------------------------|------------------------|----------------------|---------------------|----------------------|-------------------|
| (Solve quadratics   | (while a function)<br>MCSE0     | (Remainder<br>Theorem) | (Solvo simplo        | Build now functions | acustions and        | and justify       |
| with complex        | MUSE9-                          |                        | (Solve simple        | from aviating       | in a qualities       | and justify       |
| MCSE0               | 12.F.DF.10<br>(Combine standard | (Identify zeros)       |                      | functions           | mequanties           |                   |
| MGSE9-              | (Combine standard               | (Identify zeros)       | equations)           | IUNCIONS            | graphically          | sample surveys,   |
| 12.N.CN.8           | runctions)                      | TT 1 1                 |                      | MGSE9-12.F.BF.5     | MGSE9-               | experiments, and  |
| (Factoring with     | MGSE9-                          | Use polynomial         | Interpret functions  | (Inverse            | 12.A.REI.11          | observational     |
| complex solutions)  | 12.F.BF.1c                      | identities to solve    | that arise in        | relationships)      | (Solutions to        | studies           |
|                     | (Compose                        | problems               | applications in      |                     | equations)           | MGSE9-12.S.IC.3   |
| Solve equations     | functions)                      | MGSE9-12.A.APR.4       | terms of the context | Construct and       |                      | (Randomization)   |
| and inequalities in |                                 | (Polynomial            | MGSE9-12.F.IF.4      | compare linear,     | Interpret functions  | MGSE9-12.S.IC.4   |
| one variable        | Build new                       | Identities)            | (Characteristics of  | quadratic, and      | that arise in        | (Population mean) |
| MGSE9-              | functions from                  |                        | functions)           | exponential models  | applications in      | MGSE9-12.S.IC.5   |
| 12.A.REI.4          | existing functions              | Interpret functions    | MGSE9-12.F.IF.5      | and solve problems  | terms of the context | (Compare 2        |
| (Solve quadratics   | MGSE9-12.F.BF.4                 | that arise in          | (Domains of          | MGSE9-12.F.LE.4     | MGSE9-12.F.IF.6      | treatments)       |
| in 1 variable)      | (Inverse functions)             | applications in terms  | functions)           | (Express            | (Average rate of     | MGSE9-12.S.IC.6   |
| MGSE9-              | MGSE9-                          | of the context         |                      | exponential models  | change)              | (Evaluate reports |
| 12.A.REI.4b         | 12.F.BF.4a                      | MGSE9-12.F.IF.4        | Analyze functions    | as logarithmic)     | MGSE9-12.F.IF.9      | based on data)    |
| (Solve quadratic    | (f(x)=c & inverse)              | (Characteristics of    | using different      |                     | (Compare 2           |                   |
| equations by        | MGSE9-                          | functions)             | representations      |                     | functions)           |                   |
| inspection)         | 12.F.BF.4b                      | ,                      | MGSE9-12.F.IF.7      |                     | ,                    |                   |
| 1 /                 | (Use composition                | Analyze functions      | (Graph Functions)    |                     | Build new functions  |                   |
| Extend the          | to verify inverses)             | using different        | MGSE9-12.F.IF.7b     |                     | from existing        |                   |
| properties of       | MGSE9-                          | representations        | (Graph square rt.    |                     | functions            |                   |
| exponents to        | 12.F.BF.4c                      | MGSE9-12.F.IF.7        | cube rt. piecewise.  |                     | MGSE9-12.F.BF.3      |                   |
| rational exponents  | (Values of inverse              | (Graph functions)      | step & absolute      |                     | (Build new           |                   |
| MGSE9-              | function from                   | MGSE9-12 F IF 7c       | value functions)     |                     | functions from       |                   |
| 12 N RN 1           | graph or table)                 | (Graph polynomial      | MGSE9-12 F IF 7d     |                     | existing functions)  |                   |
| (Rational           | gruph of tuble)                 | functions)             | (Graph rational      |                     | enisting ranetions)  |                   |
| exponents)          |                                 | Tunetions)             | functions)           |                     |                      |                   |
| MGSE9-              |                                 |                        | runetions)           |                     |                      |                   |
| 12 N RN 2           |                                 |                        |                      |                     |                      |                   |
| (Expressions with   |                                 |                        |                      |                     |                      |                   |
| radicals & rational |                                 |                        |                      |                     |                      |                   |
| evnonents)          |                                 |                        |                      |                     |                      |                   |
| exponents)          |                                 |                        |                      |                     |                      |                   |
|                     |                                 |                        |                      |                     |                      |                   |

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