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| **Date** | **Topic** |
|  Monday12/5 | Exponent Review |
| Tuesday12/6 | Exponent Review |
| Wednesday12/7 | Rational Exponent |
| Thursday12/8 | Rational Exponent |
| Friday12/9 | Quiz |
| Monday12/12 | Graphing Square Roots |
| Tuesday12/13 | Solving roots and Rational equations |
| Wednesday12/14 | Solving Roots and Rational equations |
| Thursday12/15 | Review |
| Friday12/16 | Test |

Rational Exponents and Equations

Goals:

1. Explain how expressions with rational exponents can be rewritten as radical expressions.
2. Rewrite expressions with radicals and rational exponents into equivalent expressions using the properties of exponents.
3. Interpret expressions that represent a quantity in terms of its context. Identify and interpret parts of a square root, including terms, factors, coefficients, radicands, and exponents.
4. Create equations and inequalities in one variable that represent square roots
5. Create and graph equations in two variables to represent a square root relationship between quantities.
6. Create systems of linear, quadratic, square root, and inverse variation equations to model situations in context.
7. Justify a chosen solution method and each step of the solving process for a square root equation using mathematical reasoning.
8. Solve and interpret one variable square root equations arising from a context, and explain how extraneous solutions may be produced.
9. Understand the effects of the graphical and tabular representations of a square root function $f$ with $k\*f(x)$, $f\left(x\right)+k, f(x+k)$ for specific values of $k$ (both positive and negative).
10. Compare key features of two functions square root each with a different representation (symbolically, graphically, numerically in tables, or by verbal descriptions).
11. Analyze square root functions by generating different representations, by hand in simple cases and using technology for more complicated cases, to show key features, including: domain and range; intercepts; intervals where the function is increasing, decreasing, positive, or negative; rate of change; maximums and minimums; symmetries; and end behavior.