

Name: _____ Date: _____ Band: _____
Algebra 2

Mathematician's Guide to Rational Exponents and Radical Functions

Wow exponent laws and radicals from Algebra 1. We really do use things we learned previously later on and then inject it with some crazy math steroids. You learned how to graph these pretty cool functions and tricks regarding their behavior, domain, and range.

Make sure you can recognize and talk about these sweet ideas (including writing transformations...your

fav!). You also learned how to solve radical equations and inequalities. It is really nothing new, just SADMEGing all problems, every problem. Use this study guide to help organize all your thoughts on Rational Exponents and Radical Functions and make sure you write some examples for yourself. DISCLAIMER: Ms. Lozada is 99.9% sure (never say never...isn't that a JB song?) that you will NOT be able to use this on the assessment, but you should still complete it anyway because any and all these questions are fair game for the impending assessment.



Rational Exponents

1. How does the number of real roots depend on the index of a n th root of a ?

2. How do you write radical expressions using rational exponents and vice versa? (Hint: Explain "power over root.")

3. What are the Properties of Rational Exponents? (Provide examples)

Radical Expressions

4. What are the Properties of Radicals? (Provide examples)

5. What three conditions must be met in order for a radical to be in simplest form?

6. How do you rationalize a denominator?

7. How do you simplify radicals using a conjugate?

8. What are like radicals? How do you simplify like radicals?

9. How do you simplify variables in radical expressions?

Graphing Radical Functions

10. What is a radical function? (Give examples of parent functions and their domain/range)

11. How do you graph a radical function? How are the domain and range of a radical function related to the index of the radical? Why is the domain and range make sense in regards to radicals?

12. What are the different ways to transform a radical function?

Writing Radical Functions

13. How do you write a transformed radical function?

Solving Equations Using nth Roots

14. How do you solve equations using nth roots?

Solving Radical Equations and Inequalities

15. How do you solve radical equations? What are three different methods you could use to solve radical equations?

16. Why is it important to check your solutions when you solve radical equations?

17. How do you solve equations with a rational exponent?

18. How do you solve radical inequalities?