

## Algebra 2, Unit 5: Cubic, Cube Root and Rational Functions and Equations



### Our Learning Goals:

We will...

- ✓ graph and identify key attributes of cubic functions, and analyze the effect of transformation on the graph of the cubic parent function.
- ✓ graph and analyze key attributes of cube root functions.
- ✓ graph and apply transformations to the cube root function.
- ✓ solve cube root and other radical equations.
- ✓ recognize and use inverse variation, joint variation, and other variations.
- ✓ graph reciprocal functions and their transformations.
- ✓ graph rational function and identify key attributes including domain, range, and points of discontinuity such as asymptotes and holes.
- ✓ simplify, multiply, divide, add, subtract, and solve rational expressions and equations.

### Why do we study this?

- ❖ We can use cubic function to find volume.
- ❖ We use rational functions to help us find rates.

### How we will show what we have learned...

Formative Assessments	Summative Assessments
Ongoing formative assessments during lesson and homework activities will help in monitoring learning and providing feedback for students.	Summative assessments to measure learning at the end of concepts will include the following: <ul style="list-style-type: none"><li>• Test: Cubic &amp; Cube Root Functions</li><li>• Test: Inverse Variation, Reciprocal and Rational Functions</li><li>• Unit 6 Exam (district wide)</li></ul>

### Sample Problem:

It takes 4 students 15 hours to clean the school. How many hours would it take for 20 students to clean? How many students were cleaning if it was completed in 2.5 hours?

### Additional Support:

- Check the teacher web page and Canvas page for notes, activities, and assignments.
- Search the topic on the web. We recommend using Khan Academy.
- Attend tutorials.