

# Algebra 1, Unit 6

## Exponential Functions and Equations



### Our Learning Goals:

We will...

- ✓ graph and create exponential functions.
- ✓ calculate simple interest.
- ✓ simplify rational exponents and exponential equations.
- ✓ identify domain and range of an exponential function.
- ✓ model exponential growth and decay.
- ✓ identify horizontal asymptotes of exponential functions.
- ✓ write geometric sequences with common ratio patterns.

### Why do we study this?

- ❖ Exponential growth is the rate of growth increasing as time increases. Many quantities grow exponentially such as population, compound interest, and charge in a capacitor.
- ❖ Likewise, many quantities decay exponentially over time. Some examples include radioactive decay and the value of a car.

### Sample Problem:

Freddy's parents invested \$200 in a bank account that paid 5.5% in annual interest. How much was in the account 18 years later when he graduated high school?

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

Formative Assessments	Summative Assessments
Ongoing formative assessments during lesson & homework activities will help in monitoring learning and providing feedback for students.	Summative assessments to measure learning at the end of concepts may include the following: <ul style="list-style-type: none"><li>• Unit 6 Assessment: Exponential Functions and Equations (District-wide)</li></ul>

### Additional Support:

- Check teacher canvas for notes, worksheets, assignments, etc.
- Search the specific topic on the web. We recommend Khan Academy and Illuminations.
- Log in to the website [www.pearsonRealize.com](http://www.pearsonRealize.com).
- Attend tutorials – you can see ANY math teacher for help.
- Refer to your Algebra I homework helper textbook.