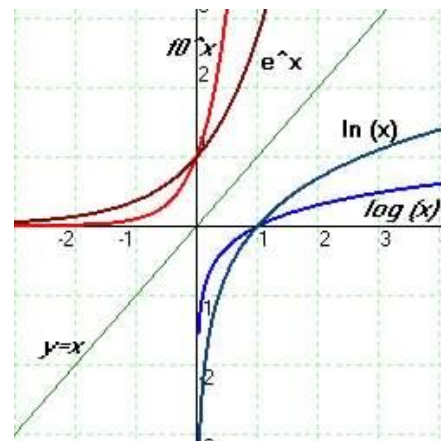


# Precalculus Unit 6: Exponential & Logarithmic Functions

## Our Learning Goals:

### We will...

- ✓ characterize key elements of exponential and logarithmic functions and their graphs.
- ✓ graph and apply transformations to exponential and logarithmic functions.
- ✓ discover and explore applications for each type of function.
- ✓ explore the limitations of the graphing calculator when it comes to asymptotes.
- ✓ solve real-world problems using these functions.
- ✓ practice the Laws of Logarithms and apply them to problem situations.
- ✓ solve mathematical problems involving these functions.
- ✓ prove exponentials and logarithms are inverses of each other.



### Sample Problem:

If you invest \$5000 in an account bearing 1.8% interest compounded monthly, how much would you have in the account after 10 years?

## Why do we study this?

- ❖ Have you ever heard of something growing exponentially? Have you ever experienced an earthquake? Exponential and logarithmic functions revolve around these types of situations.
- ❖ Our own school district uses exponential growth models to predict populations and determine the need for more schools.
- ❖ Cities use similar models to gauge the need for water, sewage, etc. based on the population.

### Additional Support:

- Check the teacher web pages for posted daily notes, worksheets, assignments, etc.
- Search the topic on the web. We recommend Khan Academy and Illuminations.
- Attend tutorials – you can see ANY math teacher for help.

## 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: Exponential Functions</li> <li>• Test: Exponential and Log Functions</li> <li>• Unit 6 Exam (district-wide)</li> </ul>