MATH NEWS

Algebra I, Module 3, Topic A

LAFAYETTE PARISH SCHOOL SYSTEM

Algebra I

Module 3: Linear and Exponential Functions

Math Parent Letter

This document is created to give parents and students a better understanding of the math concepts found in Eureka Math (© 2013 Common Core, Inc.) that is also posted as the Engage New York material which is taught in the classroom. Module 3 of Eureka Math (Engage New York) has students extend their study of functions to include function notation and the concepts of domain and range. They explore many examples of functions and their graphs, numerically, symbolically, and verbally; translate between representations; and understand the limitations of various representations.

Focus Area Topic A:

Linear and Exponential Sequences

Words to Know

Explicit Formula: A formula used to represent a sequence that specifies the *n*th term of a sequence as an expression in *n* and uses the first term number (an integer).

Recursive Formula: A formula used to represent a sequence that specifies the *n*th term of a sequence as an expression in the previous term (or previous couple of terms).

Arithmetic Sequence: A sequence in which the same number is being added to a term to get the next term.

Geometric Sequence: A sequence in which the same number is being multiplied by a term to get the next term.

Simple Interest: Interest that is calculated once per year on the original amount borrowed or invested; it does not become part of the amount borrowed or owed (the principal).

Compound Interest: Interest that is calculated once per period on the current amount borrowed or invested; each period, the interest becomes part of the principal.

Exponential Growth: A formula with a growth factor, b, such that $b > 1$; output will grow over time.

Exponential Decay: A formula with a growth factor, b, such that $b < 1$; output will diminish (decay) over time.

Focus Area Topic A:

Linear and Exponential Sequences

Lesson 1: Integer Sequences – Should You Believe in Patterns?
http://youtu.be/nrZiNHRglGY

Lesson 2: Recursive Formulas for Sequences
Video coming soon

Lesson 3: Arithmetic and Geometric Sequences
Video coming soon

Lesson 4: Why do Banks Pay YOU to Provide Their Services?
http://youtu.be/ac9mSzc9jnk

Lesson 5: The Power of Exponential Growth
During the lesson (Exercise 1):
http://www.youtube.com/watch?v=AmFMJC45f1Q
Exit Ticket Video Link:
Video coming soon

Lesson 6: Exponential Growth – U.S. Population and World Population
Video coming soon

Lesson 7: Exponential Decay
http://youtu.be/GwihW_Umy08