Secondary Math 3

Concept: \_\_\_Exponential Review\_\_\_

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| **Learning Objective:**  I know…I can… | **Assessment Examples:** |
| I can apply exponential properties and use them. | 2. Find the function that represents decay.  A.  B.  C.  D.  27. The number B of bacteria on a surface after t hours is given by  A. What is the initial amount present?  B. How many bacteria are present after 10 hours? |
| I can model real-world situations using exponential functions. | 24. How much money results from a $5,500 investment at 12% annual interest **compounded continuously** after 10 years?  ()  25. What is the final value of $1400 invested at 7.35% compounded quarterly for 20 years? |

**Launch:** (How will you begin your lesson to help students make connections to material already learned and help students understand why they are learning the new concept?)

Our warm up makes connections between geometric sequences and exponential functions, tying together previous knowledge of two concepts.

**Explore:** (How will you allow students to construct their own understandings?)

* Graphing a geometric sequence to see the exponential relationship
* Graphing two functions (decay and growth) and analyzing the graphs
* Investigating where *e* comes from
* Comparing compounding interest and continuously compounding interest

**Discuss:** (How will you share students’ learning and assure all students have a minimal level of understanding?)

We have built in “you try” examples and plan on using formative assessments throughout the lesson. Also, monitoring all the “explore” topics as they go through them.

**Summarize:** (How will you help students understand what they learned, why they learned it, how does it connect to what you already know?)

We have a check for understanding at the end, have a “discussion” part of our lesson that ties to previously learned concepts and a lot of real-world applications.