## Financial Math

## Instructional Focus: Analyze and apply different types of interest and rate

| CCSS | 4 - Mastery | 3 - Proficient | 2 - Basic | 1 - Below Basic | $\mathrm{O} \text { - No }$ <br> Evidence |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Interpret Expressions (A.SSE.1) | Can extend thinking beyond the standard, including tasks that may involve one of the following: <br> - Designing <br> - Connecting <br> - Synthesizing <br> - Applying <br> - Justifying <br> - Critiquing <br> - Analyzing <br> - Creating <br> - Proving | Interpret individual parts of expressions (such as variables, coefficients, factors, etc.) and explain their meaning in terms of the context in all of the following: <br> - Simple Interest <br> - Compound Interest <br> - Annuities <br> Group parts of an expression and interpret their meaning in terms of the context in all of the following: <br> - Simple Interest <br> - Compound Interest <br> - Annuities | Interpret individual parts of expressions (such as variables, coefficients, factors, etc.) and explain their meaning in terms of the context in two of the following: <br> - Simple Interest <br> - Compound Interest <br> - Annuities <br> Group parts of an expression and interpret their meaning in terms of the context in two of the following: <br> - Simple Interest <br> - Compound Interest <br> - Annuities | Interpret individual parts of expressions (such as variables, coefficients, factors, etc.) in all of the following: <br> - Simple Interest <br> - Compound Interest <br> - Annuities <br> Group parts of an expression and interpret their meaning in all of the following: <br> - Simple Interest <br> - Compound Interest <br> - Annuities | Little <br> evidence of reasoning or application to solve the problem <br> Does not meet the criteria in a level 1 |
| Create and solve equations <br> (A.CED. 2 <br> A.CED.4) |  | Create and solve equations to represent relationships in contextual situations, including all the following situations: <br> - Simple Interest <br> - Compound Interest <br> - Annuities <br> - Amortization | Create and solve equations to represent relationships in contextual situations, including two the following situations: <br> - Simple Interest <br> - Compound Interest <br> - Annuities <br> - Amortization | Create and solve equations to represent relationships in contextual situations, in one of the following situations: <br> - Simple Interest <br> - Compound Interest <br> - Annuities <br> - Amortization |  |
| Exponential and Logarithmic inverses (F.BF.5) |  | Recognize that exponential and logarithmic functions are inverses of each other and use these functions to solve real-world problems. | Recognize that exponential and logarithmic functions are inverses of each other and use these functions to solve logarithmic and exponential equations. | Recognize that exponential and logarithmic functions are inverses of each other and convert from one form into the other. |  |
| Compare <br> Rate of Change (F.LE.3, F.IF.6) |  | Calculate and compare the rate of change and value of function presented in symbolic and table form in context of a situation and use it to make a decision <br> - Stated rate <br> - Effective rate | Calculate and compare the rate of change and value of function presented in symbolic and table form in context of a situation <br> - Stated rate <br> - Effective rate | Calculate the rate of change and value of a function presented in symbolic or table form <br> - Stated rate <br> - Effective rate |  |

A.CED. 2 Create equations in two or more variables to represent relationships between quantities; ofraph equations on coordinate-axes with labels and scales.
A.CED. 4 Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law $V=I R$ to highlight resistance R.
A.SSE. 1 Interpret expressions that represent a quantity in terms of its context. $\star$
a. Interpret parts of an expression, such as terms, factors, and coefficients.
b. Interpret complicated expressions by viewing one or more of their parts as a single entity. For example, interpret $P(1+r)$ n as the product of $P$ and a factor not depending on $P$.
F.BF5. (+) Understand the inverse relationship between exponents and logarithms and use this relationship to solve problems involving logarithms and exponents.
F.LE. 3 Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function. *(Modeling Standard)
F.IF. $6 \quad$ Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.

