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| **LG #** | **T02** | **Standards:** | **F-TF.2.5, F-TF.2.6, F-TF.2.7** |
| **4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond instruction to the standard.**  **The student will be able to:**   * Create a piece-wise function that includes at least one trigonometric function to model periodic phenomena.   **No major errors or omissions regarding the score 4.0 content.** | | |
| **3.5** | In addition to 3.0, in-depth inferences and applications with partial success. | | |
| **3.0** | **Students will be able to model periodic phenomena using trigonometric functions**  **The student will be able to:**   * Write trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline **(F-TF.2.5)** * Understand that restricting a trigonometric function to a domain on which it is always increasing or always decreasing allows its inverse function to be constructed **(F-TF.2.6)** * Use inverse functions to solve trigonometric equations that arise in modeling contexts **(F-TF.2.7)** * Interpret the solutions of trigonometric functions using technology **(F-TF.2.7)**   **No major errors or omissions regarding the score 3.0 content (simple or complex).** | | |
| **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of 3.0 content. | | |
| **2.0** | **The student recognizes and describes specific terminology such as:**   |  |  |  | | --- | --- | --- | | * periodic phenomena | * amplitude | * frequency | | * Midline | * domain | * increasing | | * decreasing | * inverse | * oscillating | | * sinusoidal | * phase shift | * Vertical displacement |   **The student will be able to:**   * Choose trigonometric functions to model periodic phenomena **(F-TF.2.5)** * Understand when a trigonometric function is increasing or decreasing (**F-TF.2.6)** * Use inverse functions to solve trigonometric equations**(F-TF.2.7)** * Evaluate the solutions of trigonometric functions using technology**(F-TF.2.7)** | | |
| **1.5** | Partial knowledge of the score 2.0 content, but major errors or omissions regarding score 3.0 content. | | |
| **1.0** | With partial understanding of some of the simpler details and processes and some of the more complex ideas and processes. | | |
| **0.5** | With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes. | | |
| **0.0** | Even with help, no understanding or skill is demonstrated | | |