**UNIT 1: Limits and Continuity**

**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ PER \_\_\_\_\_\_\_\_\_\_\_ DATE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| **LT** | **Description** | **Standard** |  |  |  |  | **NEXT STEPS** |
| **1A** | I can explain the ***concept of a limit***. | **1.0** |  |  |  |  |  |
| **1B** | I can use ***one-sided limits*** (from a table or graph) to make a conjecture about the existence of a limit, estimate the value of the limit, and explain the connection to the (informal) definition of a limit  | **1.3** |  |  |  |  |  |
| **1C** | Use ***limit theorems*** to evaluate the limits of constants, sums, products, quotients, composition of functions and piecewise functions and explain why the theorem leads to finding a solution to the limit.  | **1.0** |  |  |  |  |  |
| **1D** | Determine when a limit is in ***indeterminate form*** and explain how to manipulate the function in order to determine its value.  | **1.4** |  |  |  |  |  |
| **1E** | Explain the concept of a vertical and horizontal asymptote and evaluate a variety of ***infinite limits*** and limits at infinity. | **1.1** |  |  |  |  |  |
| **1F** | Explain the similarities and differences between infinite limits and limits at infinity. Describe the ***connection between limits and asymptotes.***  | **1.1** |  |  |  |  |  |
| **1G** | Explain the meaning of the ***continuity*** of a function at a point, and analyze and describe the discontinuities of a function on an interval.  | **2.0** |  |  |  |  |  |
| **1H** | Use the ***limits of sin(x)/x and (1-cos(x))/x*** as x tends to 0 and trigonometric identities to evaluate limits with trigonometric functions.  | **1.2** |  |  |  |  |  |

**UNIT 0: WEEK 1 Piecewise Functions Review**

**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ PER \_\_\_\_\_\_\_\_\_\_\_ DATE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| **LT** | **Description** | **Standard** |  |  |  |  | **NEXT STEPS** |
| **--** | I can illustrate a composite function graphically and connect domain and range to **translations** (**shifting techniques**) in **piecewise functions**, i.e. . I can translate/shift the **library of functions**, including the **greatest integer function**. | **PC2f** |  |  |  |  |  |