First Name _____ Last Name _____ Due ___ – ___ – ___ Period _____ Score _____

MODEL	Integrating	Applying	Practicing	Acquiring	Awaiting Evidence
I can use math to model and solve real-world problems.	Correctly identifies important quantities and illustrates their relationships using diagrams, tables, graphs, or formulas. Appropriate work is shown with no errors. The answer includes units and rounding as appropriate to the problem. Explains how the answer makes sense in the context of the problem.	Correctly identifies important quantities and illustrates their relationships using diagrams, tables, graphs, or formulas. Appropriate work is shown with no errors. The answer includes units and rounding as appropriate to the problem.	Correctly identifies important quantities and illustrates their relationships using diagrams, tables, graphs, or formulas. Appropriate work is shown with 1 COMPUTATIONAL or ROUNDING error.	Correctly identifies important quantities and attempts to illustrate their relationships using diagrams, tables, graphs, or formulas Appropriate work is shown with 1 CONCEPTUAL error.	Correctly identifies important quantities and attempts to illustrate their relationships using diagrams, tables, graphs, or formulas Appropriate work is shown with more than 1 conceptual error.
Criteria					

1. Create a problem of calculating a limit meeting the following requirements, then solve it.

   (a) It finds the limit of a function at the number $n =$ an integer.

   (b) It's a fraction and when plugging in n directly it becomes "$\frac{0}{0}$".

   (c) It has a square root expression at either the numerator or the denominator.

   (d) It's solvable with the "multiplying the conjugate" trick.

   Here is a model problem: $\lim\limits_{x \to 2} \dfrac{\sqrt{x+2} - 2}{x - 2}$

2. Create a problem of calculating a limit at the positive infinity meeting the following requirements, then solve it.

   • The function is a rational function, namely, a quotient between two polynomials.
   • The answer is a nonzero number.

3. Create a problem of calculating a limit at the negative infinity meeting the following requirements, then solve it.

   • The function is a rational function, namely, a quotient between two polynomials.
   • The answer is the positive infinity.