Use your calculator to evaluate $\lim_{t \to 2} \dfrac{7t^5 - 224}{t^7 - 128}$. GRADED BY ME **SCORE: ____ / 1 PTS**

Fill in the table below showing the input and output values you used to arrive at your answer. You must use at least 6 input values.

Input value =	1.9	1.99	1.999	2.001	2.01	2.1
Output value =	1.3123	1.2562	1.2506	1.2494	1.2438	1.1876

Limit = 1.25 OTHER VALUES POSSIBLE ABOVE

Let P be the point on the curve of $f(x) = \sqrt{3 + x^5}$ where $x = 1$. GRADED BY ME **SCORE: ____ / 2 PTS**

[a] If Q is the point on the same curve where $x = a$, write the expression for the slope of the secant line PQ. $\dfrac{\sqrt{3+a^5} - 2}{a - 1}$

[b] Use your calculator to evaluate the slope of 6 **appropriate** secant lines, then guess the slope of the tangent line at P. Fill in the table below showing the values of a and the corresponding slopes you used to arrive at your answer.

a =	0.9	0.99	0.999	1.001	1.01	1.1
slope of secant line =	1.0514	1.229	1.2479	1.2521	1.2712	1.4721

slope of tangent line = 1.25 OTHER VALUES POSSIBLE ABOVE