Group F: Use functions and other pre-Calculus mathematics proficiently.

- F.1 **(CORE)**: I can evaluate functions given in different representations, find composites of functions, and determine the domain and range of a function. (*Assessed via the Functions Bootcamp assignment*)
- F.2: I can find the average rate of change of a function on an interval.

Group L: Calculate, use, and explain the concept of limits.

- L.1: **(CORE)** I can find the limit of a function at a point using numerical, graphical, and algebraic methods.

Group D: Explain and interpret the meaning of the derivative of a function.

- D.1 **(CORE)**: I can find the derivative of a function, both at a point and as a function, using the definition of the derivative.
- D.2 **(CORE)**: I can use derivative notation correctly, state the units of a derivative, estimate the value of a derivative using difference quotients, and correctly interpret the meaning of a derivative in context.
- D.3 **(CORE)**: Given information about f, f', or f'', I can correctly give information about f, f', or f'' and the increasing/decreasing behavior and concavity of f (and vice versa).
- D.4: I can find the equation of the tangent line to a function at a point and use the tangent line to estimate values of the function.

Group DC: Use shortcuts to calculate derivatives efficiently.

- DC.1 **(CORE)**: I can compute derivatives correctly for power, polynomial, and exponential functions and the sine and cosine functions, and basic combinations of these (constant multiples, sums, differences).
- DC.2 **(CORE)**: I can compute derivatives correctly for products, quotients, and composites of functions.
- DC.3: I can compute derivatives correctly using multiple rules in combination.
- DC.4: I can compute the derivatives correctly for logarithmic, trigonometric, and inverse trigonometric functions.

Group DA: Use derivatives to solve authentic real-life application problems.

- DA.1 **(CORE)**: I can find the critical values of a function, determine where the function is increasing and decreasing, and apply the First and Second Derivative Tests to classify the critical points as local extrema.
- DA.2: I can determine the intervals of concavity of a function and find all of its points of inflection.
- DA.3: I can use the Extreme Value Theorem to find the absolute maximum and minimum values of a continuous function on a closed interval.
- DA.4 **(CORE)**: I can set up and use derivatives to solve applied optimization problems.

Group INT: Use definite integrals and the Fundamental Theorem of Calculus to find areas and total change.

- INT.1: I can calculate the area between curves, net change, and displacement using geometric formulas and Riemann sums.
- INT.2: I can explain the meaning of each part of the definition of the definite integral in terms of a graph, and interpret the definite integral in terms of areas, net change, and displacement.
- INT.3: I can evaluate a definite integral using geometric formulas and the Properties of the Definite Integral.
- INT.4 **(CORE)**: I can evaluate a definite integral using the Fundamental Theorem of Calculus.
- INT.5: I can correctly antidifferentiate basic functions and identify antiderivatives.