

Name _____

MAT21AB Honors Written Assignment
Due Tuesday, 11/5

Read, Reflect, and React (or Respond) Prompt #5

Integrals is one of the basic tools of calculus, with numerous applications in science and engineering. The founders of calculus thought of the integral as an infinite sum of rectangles of infinitesimal width, which lead to its initial use of calculating geometric quantities such as area and volume. More generally, integrals can be used as a way to totalize any given rate over a range of quantities, which has made it useful in many disciplines. These uses range from engineers finding centers of mass to statisticians finding averages. Today, I presented a number of examples. I would like you to think of your own example by answering the following:

1. Provide an example which utilizes an indefinite integral that is connected to your life. Clearly state the meaning, including units, behind the variable x , the function $f(x)$, and the resulting integral. Also, state how it's connected to your life. Solving is optional.