# READING ASSIGNMENT 01

NAME: _____

§5.2 (Definite Integrals)

Due 26 June 2018

## LEARNING OBJECTIVES

By the end of this section, you will be able to:

- use geometry to compute simple definite integrals;
- write down integrals for the (signed) area under a curve;
- estimate an integral using right endpoint or left endpoint approximations.

## REVIEW

- To review summation notation, read pages 227-228 in section 5.1 in the textbook, or watch this YouTube video: https://youtu.be/54Q0KXX_vIs. Another helpful resource is the website at the URL below.

  http://www.columbia.edu/itc/sipa/math/summation.html

- To review functions and graphing, read sections 1.1-1.4 in the textbook. Desmos is a good online tool for visualizing graphs: https://www.desmos.com/calculator.

## READING

- Read section 5.2 in the textbook, or watch the YouTube video at the URL below and answer the following questions.

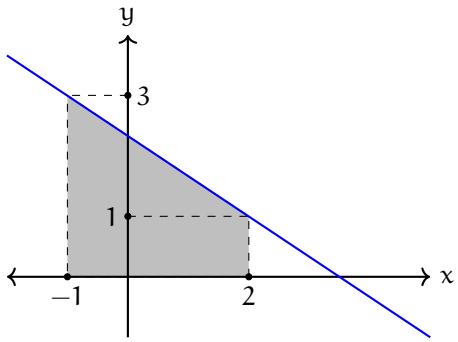
  https://www.youtube.com/watch?v=UG3GchWca7c&feature=youtu.be

## QUESTIONS

(1) Using at least six rectangles, estimate the area under the graph of $f(x) = 2x + 3$ over the interval $[0, 3]$.

(2) Write down integrals to represent the following areas:

(a) the shaded quadrilateral pictured below.




(b) the area under the quarter-circle pictured below.