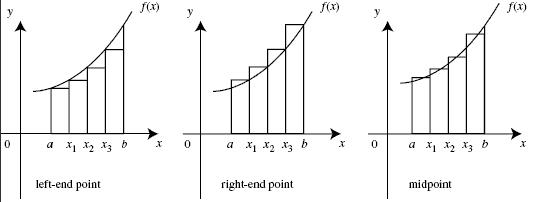
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Math 31A Lecture Notes: Riemann Sums

Area: Distance traveled = velocity \* time lapsed (constant velocity)



Let be a positive continuous function on an interval .

Goal: Compute area under the graph of on

Method: Approximate by rectangles and taking the limit

Subdivide into equally long intervals:

, ...

Approximate area under graph, by rectangles whose height is given by the value of

at the right endpoint.

Calculate area of rectangles:

This is called the nth right endpoint approximation of the area under the graph of

on

Example 1: Compute for on the interval

S1: Setup

S2: Compute

Summation notation:

Let be real numbers such that

“Sum over from equals to ”

Properties of Summation

j \_jies of Summaann ea under the graph of f()se height iThree common types of Riemann Sums

