

Additional Questions for Homework on Section 5.2.

For A-D, calculate the Riemann sum for the given function over the given interval with the specified partition and sample points

A.  $f(x) = x^3 + 1$ , over  $[0, 2]$  with five subintervals of equal width using midpoint sample points.

B.  $g(x) = \frac{1}{x}$ , over  $[3, 5]$  with four subintervals of equal width using left-hand endpoints.

C.  $h(x) = x^2 + x$ , over  $[2, 4]$  with the partition  $P = \{2, 2.5, 2.8, 3.3, 4\}$  and sample points, 2.4, 2.8, 3.2, 3.6.

D.  $f(x) = x^2 + 10$ , over  $[0, 1]$  with the partition  $P = \{0, 0.2, 0.3, 0.5, 0.8, 1\}$  and sample points, 0, 0.3, 0.4, 0.7, 1.

E. Find the norm of the partition for each of the Riemann sums in A-D.