R. Bruner
Math 2010, Winter 2007, Quiz 13
11 April 2007

Estimate $\int_1^7 \frac{x-2}{x}\,dx$ using 3 equal intervals and

1. left endpoints as sample points
2. midpoints as sample points

It is sufficient to write the correct sum; you do not need to actually add up the fractions.

3 intervals, so $\Delta x = \frac{7-1}{3} = 2$

Interval	L	M
$[1, 3]$	$\frac{-1}{1}$	0
$[3, 5]$	$\frac{1}{3}$	$\frac{2}{4}$
$[5, 7]$	$\frac{3}{5}$	$\frac{4}{6}$

1. Left endpoint estimate $= 2\left(-1 + \frac{1}{3} + \frac{3}{5}\right)$

2. midpoint estimate $= 2\left(0 + \frac{2}{4} + \frac{4}{6}\right)$