

8. (9 points) The table gives the values of a function obtained from an experiment.

$x$	0	1	2	3	4	5	6	7	8
$f(x)$	9.3	9.1	8.3	6.9	3.3	-0.6	-1.7	-3.5	-6.7

(a) Using these values, estimate  $\int_0^8 f(x) dx$  using 4 subintervals and right hand endpoints.

(b) If  $f$  is known to be a decreasing function, can you determine if your answer in part (a) is an over or underestimate? If so, which is it? If not, why not. Be sure to explain your answer.