

Left, Right, Mid, Trap

Date _____

Suppose $f(x)$ is a continuous function, evaluated at selected values below. Use the table to approximate the specified definite integral using 4 left rectangles and 4 right rectangles.

1) $\int_0^9 f(x) dx$

x	0	2	3	8	9
$f(x)$	7	8	7	6	5

2) $\int_0^{10} f(x) dx$

x	0	1	6	9	10
$f(x)$	7	8	6	4	5

3) $\int_0^8 f(x) dx$

x	0	3	6	7	8
$f(x)$	4	5	7	5	7

4) $\int_0^8 f(x) dx$

x	0	3	4	7	8
$f(x)$	7	9	8	7	9

For each problem, approximate the area under the curve over the given interval using 4 midpoint rectangles.

5) $y = \frac{x^2}{2} - x + 2; [-3, 1]$

6) $y = -\frac{x^2}{2} - x + 5; [-2, 2]$

7) $y = \frac{1}{x}; [1, 5]$

8) $y = \frac{3}{x}; [2, 6]$

For each problem, approximate the area under the curve over the given interval using 4 trapezoids.

9) $y = x^2 + 4; [-1, 3]$

10) $y = \frac{4}{x}; [2, 6]$

11) $y = x^2 + 2x + 4; [-2, 2]$

12) $y = -\frac{2}{x}; [-5, -1]$