Checkup 9

Date_____

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

1) $y = \sqrt{9 - x^2}$; [–2, 1]

For each problem, approximate the area under the curve over the given interval using 3 right endpoint rectangles.

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

For each problem, approximate the area under the curve over the given interval using 5 midpoint rectangles.

3) $y = -\frac{5}{x}$; [–6, –1]

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

4) $y = 6 - \frac{1}{4}x^2;\ [-2, 4]$

For each problem, use a left-hand Riemann sum to approximate the integral based off of the values in the table.

5) $\int_0^8 f(x)\,dx$

x	0	2	6	7	8
$f(x)$	4	2	3	2	3

For each problem, use a right-hand Riemann sum to approximate the integral based off of the values in the table.

6) $\int_0^{18} f(x)\,dx$

x	0	2	3	13	16	17	18
$f(x)$	9	8	7	5	2	5	4

Checkup 9

Date_____

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

1) $y = \sqrt{9 - x^2};\ [-2, 1]$

8.183

For each problem, approximate the area under the curve over the given interval using 3 right endpoint rectangles.

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

11.963

For each problem, approximate the area under the curve over the given interval using 5 midpoint rectangles.

3) $y = -\frac{5}{x};\ [-6, -1]$

$\frac{6086}{693} \approx 8.782$

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

4) $y = 6 - \frac{1}{4}x^2;\ [-2, 4]$

29.438

For each problem, use a left-hand Riemann sum to approximate the integral based off of the values in the table.

5) $\int_0^8 f(x)\,dx$

x	0	2	6	7	8
$f(x)$	4	2	3	2	3

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For each problem, use a right-hand Riemann sum to approximate the integral based off of the values in the table.

6) $\int_0^{18} f(x)\,dx$

x	0	2	3	13	16	17	18
$f(x)$	9	8	7	5	2	5	4

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