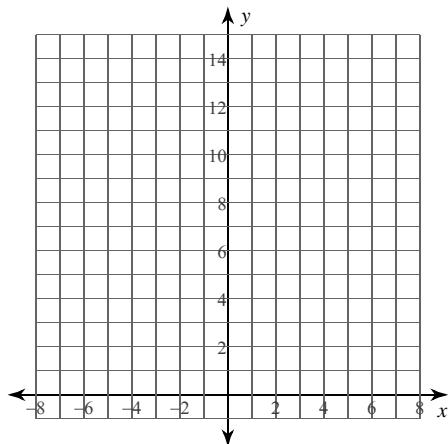


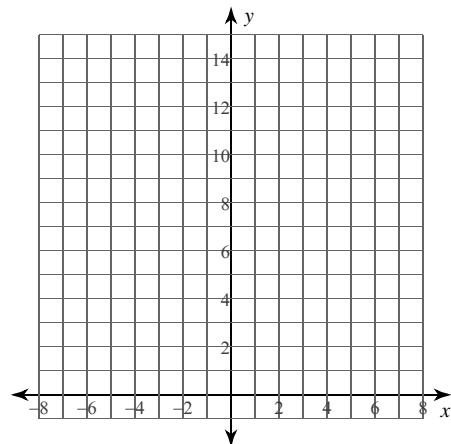
Calculus Practice: Riemann Sums 3b

For each problem, approximate the area under the curve over the given interval using 4 midpoint rectangles. You may use the provided graph to sketch the curve and rectangles.

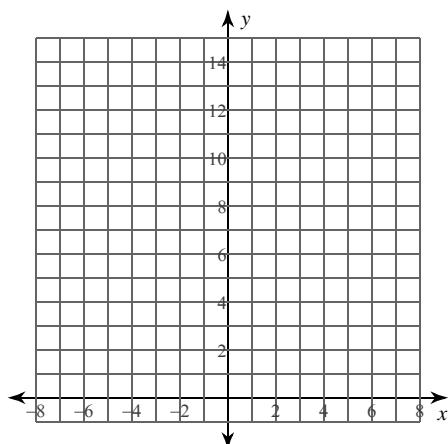
1) $y = -x + 5$; $[-3, 1]$



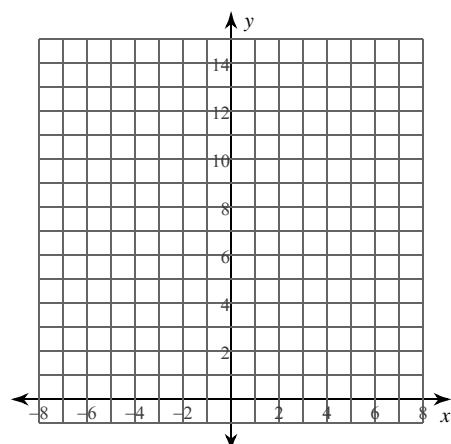
2) $y = -x + 3$; $[0, 2]$



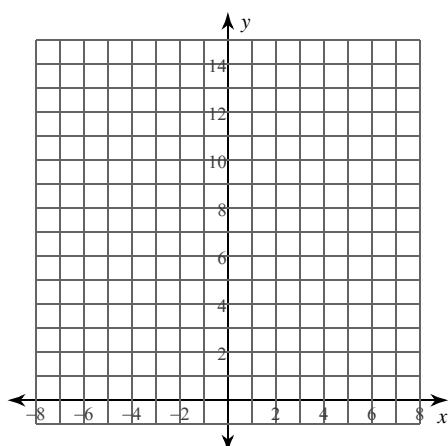
3) $y = x + 6$; $[-3, -1]$



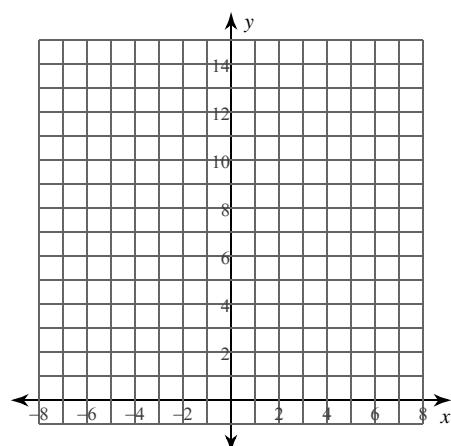
4) $y = \frac{x}{2} + 3$; $[-5, 3]$



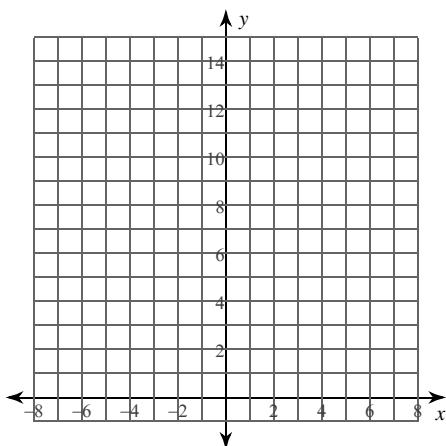
5) $y = -x^2 - 2x + 10$; $[-2, 2]$



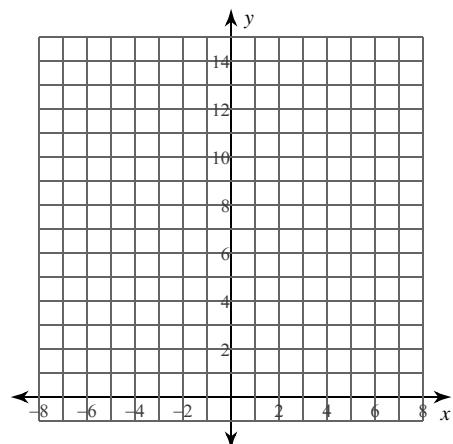
6) $y = -x^2 + 11$; $[-1, 3]$



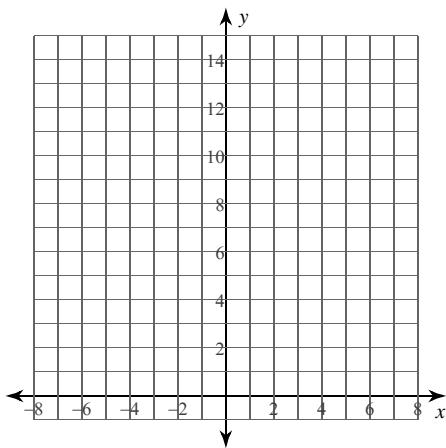
7) $y = x^2 - 2x + 3$; $[0, 2]$



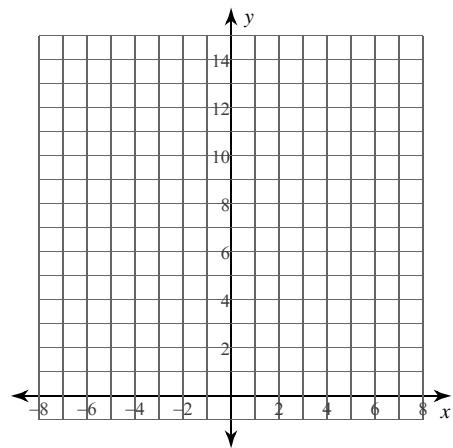
8) $y = \frac{x^2}{2} - x + 1$; $[1, 5]$



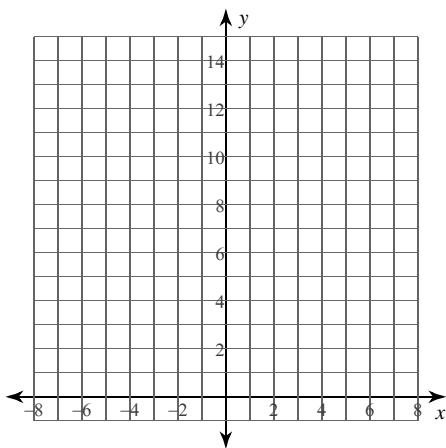
9) $y = \frac{1}{x}$; $[1, 3]$



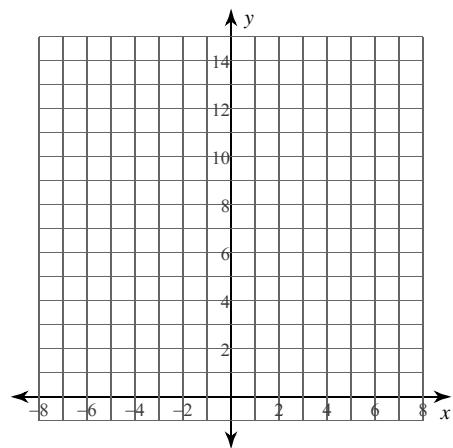
10) $y = -\frac{3}{x}$; $[-3, -1]$



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



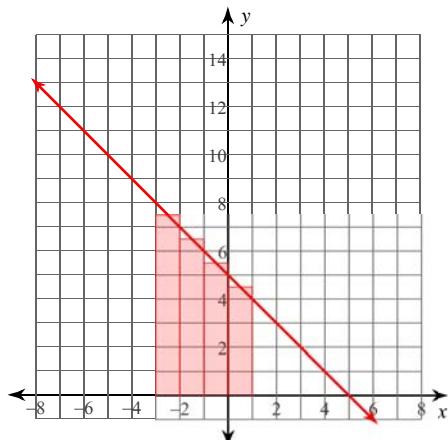
12) $y = \frac{4}{x}$; $[1, 3]$



Calculus Practice: Riemann Sums 3b

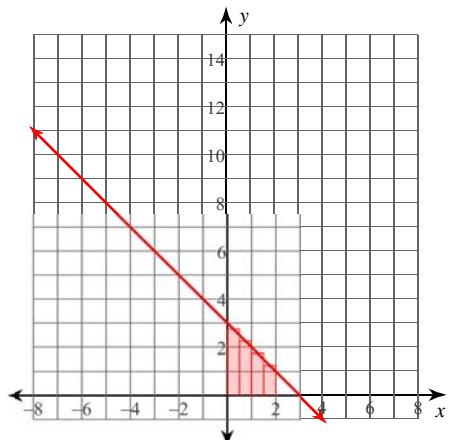
For each problem, approximate the area under the curve over the given interval using 4 midpoint rectangles. You may use the provided graph to sketch the curve and rectangles.

1) $y = -x + 5$; $[-3, 1]$



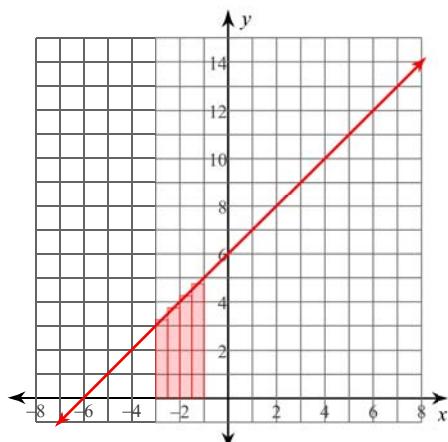
24

2) $y = -x + 3$; $[0, 2]$



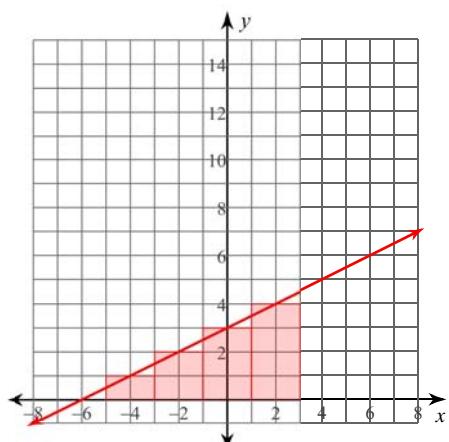
4

3) $y = x + 6$; $[-3, -1]$



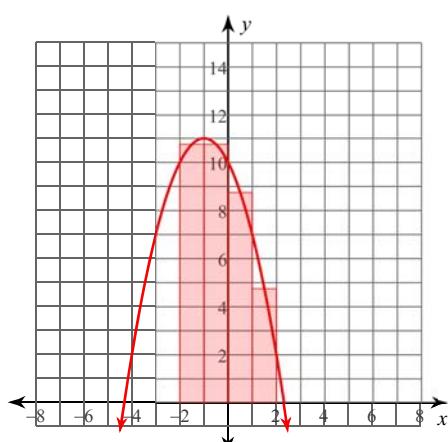
8

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



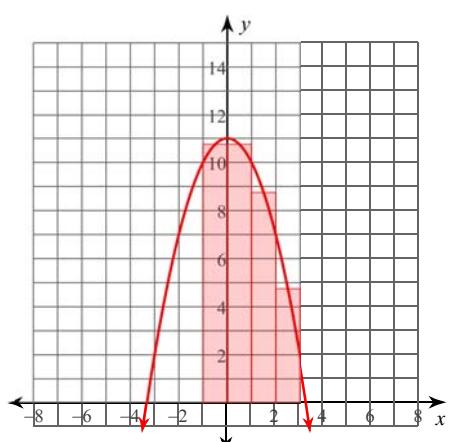
20

5) $y = -x^2 - 2x + 10$; $[-2, 2]$



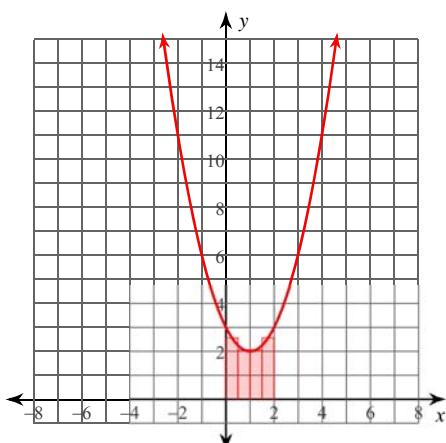
35

6) $y = -x^2 + 11$; $[-1, 3]$



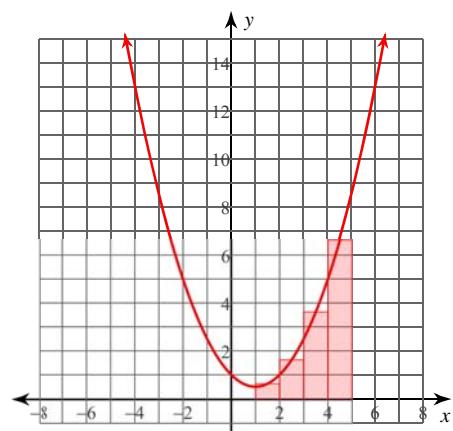
35

7) $y = x^2 - 2x + 3$; $[0, 2]$



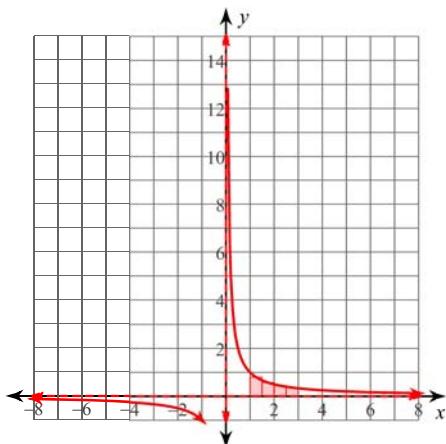
$$\frac{37}{8} = 4.625$$

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



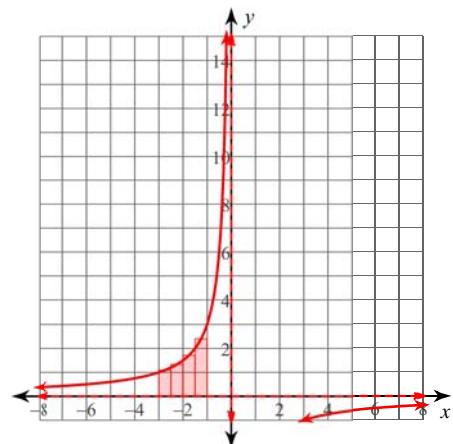
$$\frac{25}{2} = 12.5$$

9) $y = \frac{1}{x}$; $[1, 3]$



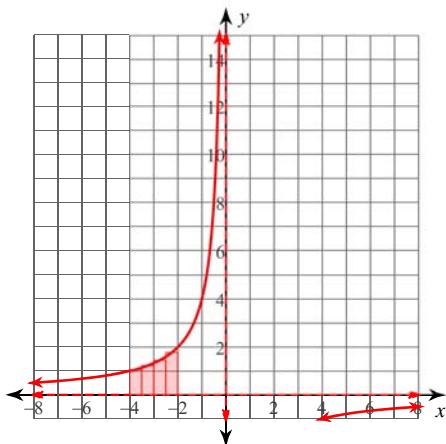
$$\frac{3776}{3465} \approx 1.09$$

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



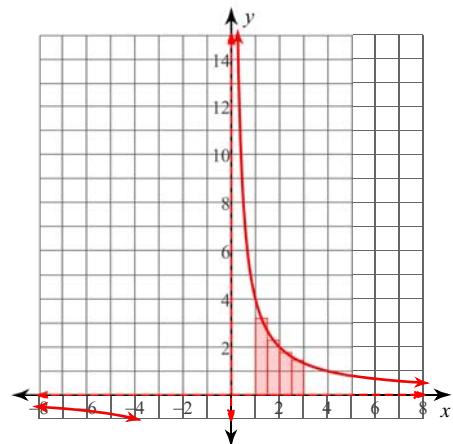
$$\frac{3776}{1155} \approx 3.269$$

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



$$\frac{17792}{6435} \approx 2.765$$

12) $y = \frac{4}{x}$; $[1, 3]$



$$\frac{15104}{3465} \approx 4.359$$