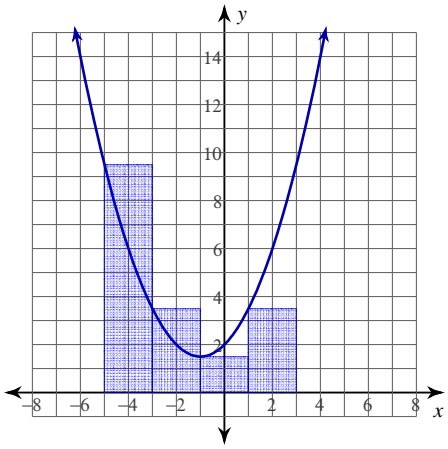
Kuta Software - Infinite Calculus Name_____

Approximating Area Under a Curve

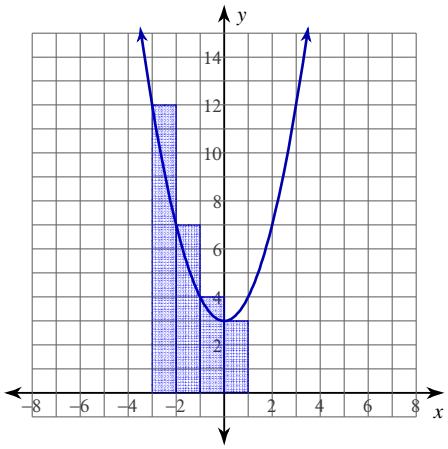
Date_____ Period____

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

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

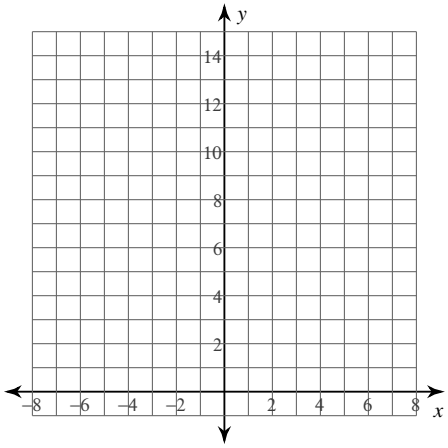


2) $y = x^2 + 3;\ [-3, 1]$

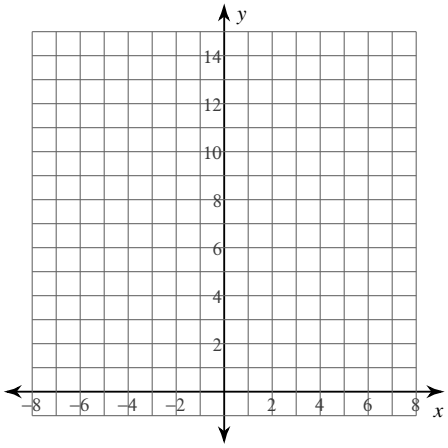


For each problem, approximate the area under the curve over the given interval using 5 right endpoint rectangles. You may use the provided graph to sketch the curve and rectangles.

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

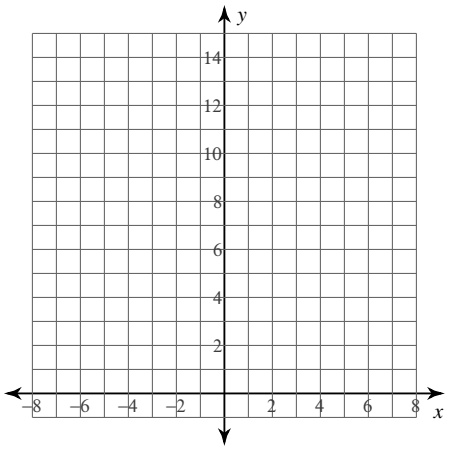


4) $y = -\frac{x^2}{2} + x + 5;\ [-1, 4]$

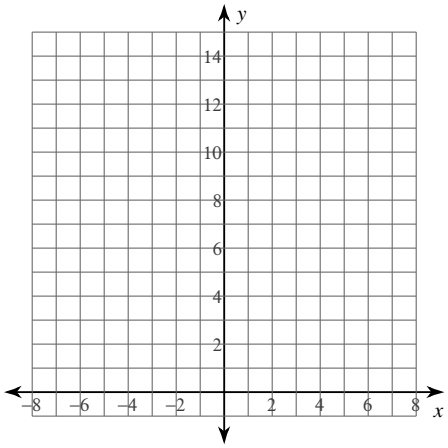


For each problem, approximate the area under the curve over the given interval using 4 inscribed rectangles. You may use the provided graph to sketch the curve and rectangles.

5) $y = -x + 5;\ [-7, -5]$

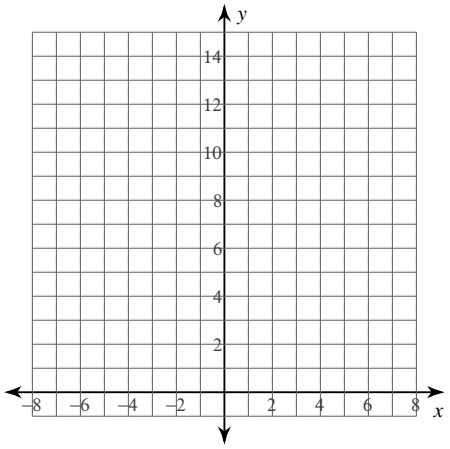


6) $y = \frac{2}{x};\ [1, 5]$

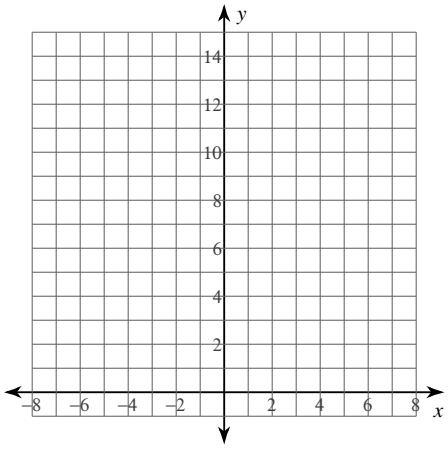


For each problem, approximate the area under the curve over the given interval using 4 midpoint rectangles. You may use the provided graph to sketch the curve and rectangles.

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



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



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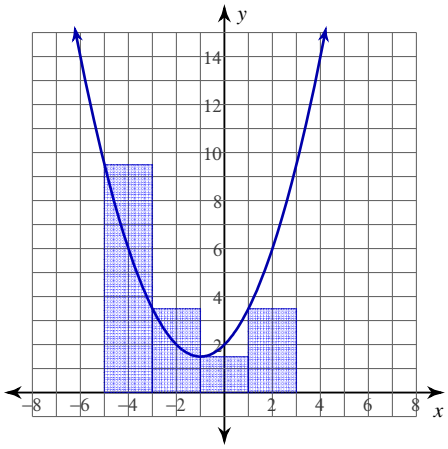

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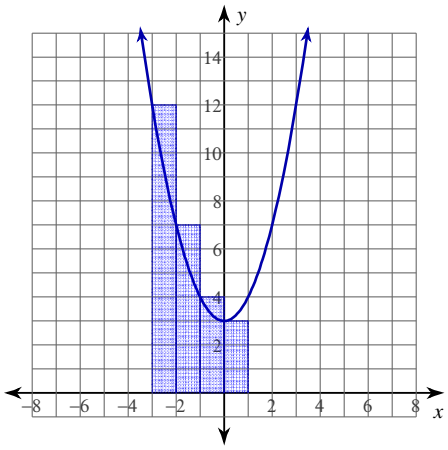
2) $y = x^2 + 3;\ [-3, 1]$



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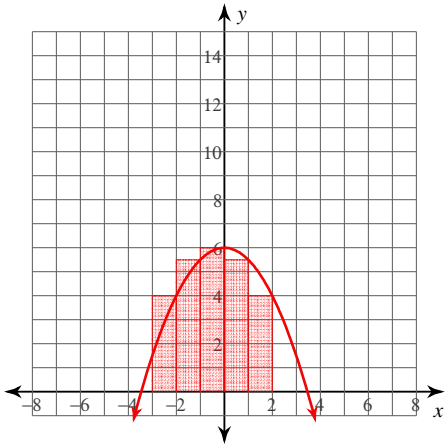
For each problem, approximate the area under the curve over the given interval using 5 right endpoint rectangles. You may use the provided graph to sketch the curve and rectangles.

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



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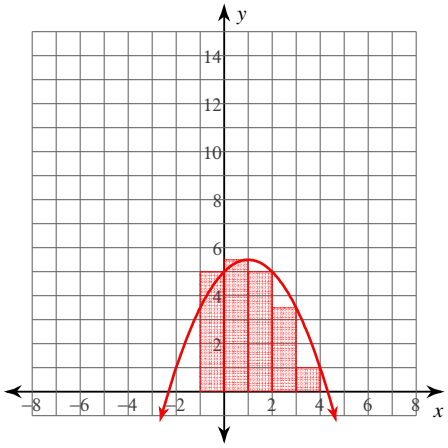
4) $y = -\frac{x^2}{2} + x + 5;\ [-1, 4]$



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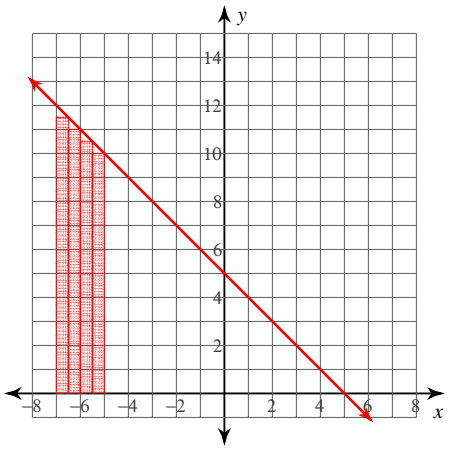
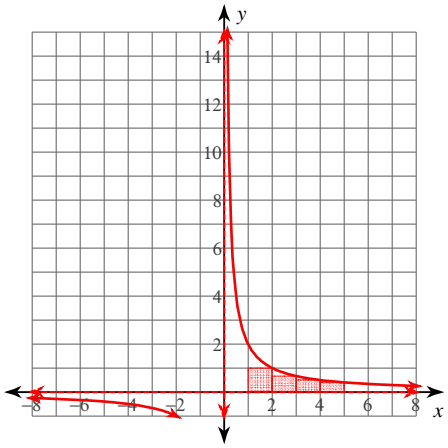


$\frac{43}{2} = 21.5$

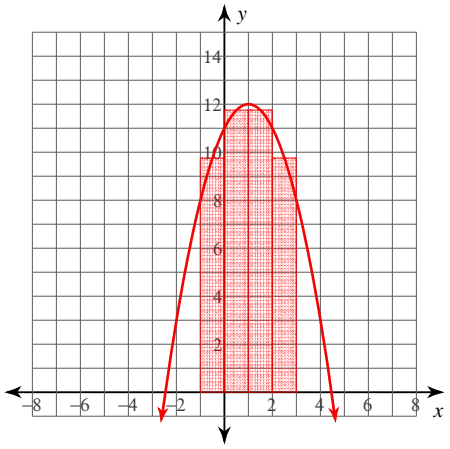
6) $y = \frac{2}{x};\ [1, 5]$



$\frac{77}{30} \approx 2.567$

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.

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



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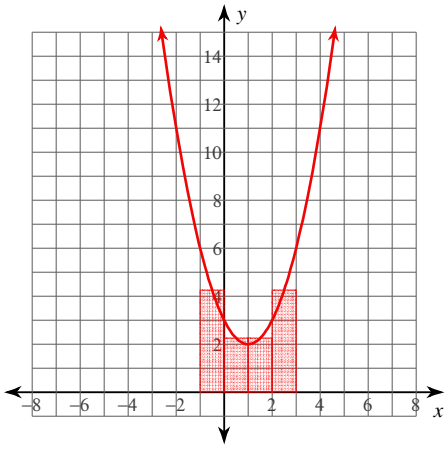
8) $y = x^2 - 2x + 3;\ [-1, 3]$



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