Calculus

Name_____

Approximating area with rectangles

Date_____ Period____

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

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

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

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

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

4) $y = -x^2 + 13;\ [-2, 3]$

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

5) $y = -x + 6;\ [-6, -2]$

6) $y = -\frac{x}{2} + 4;\ [3, 7]$

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

7) $y = -x^2 + 2x + 10;\ [0, 4]$

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