

Math 241 Worksheet 12 (two-sided)

Name: _____

Section (circle one): **3** **4**

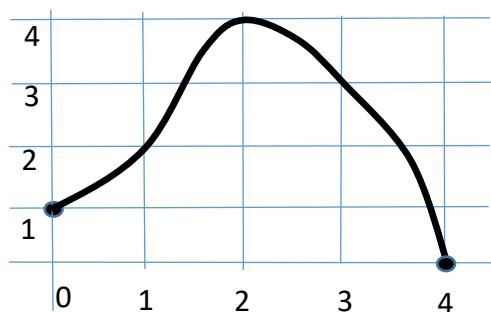
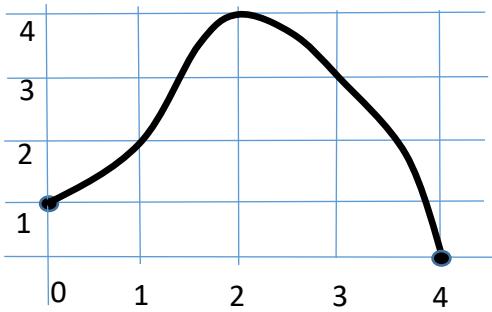
1. Find $\int(x^2 + 2x + 3 + \frac{1}{x^2} + \sqrt{x}) dx$

2. Solve for y , given $\frac{dy}{dx} = \sin(3x) + 3\cos(x)$.

3. Solve for $f(x)$, given $f'(x) = 6x + \sin(x)$, $f(0) = 1$

4. Consider the given graph on domain $[0,4]$. Find the requested area estimate (Riemann sum) and draw and shade in the corresponding rectangles.

(a) An upper sum using four equal width rectangles (b) A lower sum using four equal width rectangles



(c) Four equal width rectangles and left endpoints (d) Four equal width rectangles and right endpoints

