

Name: \_\_\_\_\_

## Calculus Your Try Problems for Chapter 6

6a) Repeat my example with your own squiggle.

6b) Make a slope field for  $f(x) = \frac{2}{x}$ . Use it to find solutions to  $\int \frac{2}{x} dx$ .

6d1) Use a spreadsheet to graph the integral of  $f(x) = \frac{2}{x}$ .

6d2) Create another column in your spreadsheet  $y = \ln x^2$ . Does this column have the same values as your Riemann sum column?

6e) Use a spreadsheet to graph the integral of  $f(x) = e^{-x^2}$ .

6f)  $F(x) = \int 5x^4 + x^2 + \sqrt{x} + \frac{1}{x} dx$

6g)  $F(x) = \int \frac{5}{x^2} + \frac{3}{x} + 2 \sin x - e^{x/2} + 3 \sec^2 9x dx$

6h) The velocity of a particle is given by  $v = 2^{-t}$ . Find the position when  $t=2$ . (I'm being a little mean with this one) ( $x_i = 0$ ).

6j)  $F(x) = \int_1^3 \sqrt{\sinh x + 5} dx$

6k) Given that  $\int_5^7 f(x) dx = 3$ ,  $\int_5^{-1} f(x) dx = 4$  and  $\int_{-1}^7 g(x) dx = 18$ , find  $\int_{-1}^7 f(x) - g(x) dx = ?$