Name:_____

Calculus Your Try Problems for Chapter 5

5a) $f(x)=x^2$. Find $f(0.5)$, $f(1.5)$, $f(2.5)$, $f(3.5)$. Use that data to approximate the area under $f(x)=x^2$ from $0\le x\le 4$.

5b) Use a spreadsheet to find the left and right Riemann sums for $f(x)=e^{-x}$ with $0\le x\le 2$ and $\Delta x=0.05$.

5c) Use the following table to approximate the distance traveled by an object.

Time (in seconds)	0	1	2	3	4	5
Velocity (in meters/second)	5	2	-1	3	4	0

5d) $\int (x^4-5x+3)\,dx=?$

5e1) What function has $f'(x)=\frac{1}{x}+\cos x$?

5e2) $\int \frac{1}{x}+\cos x\,dx=?$

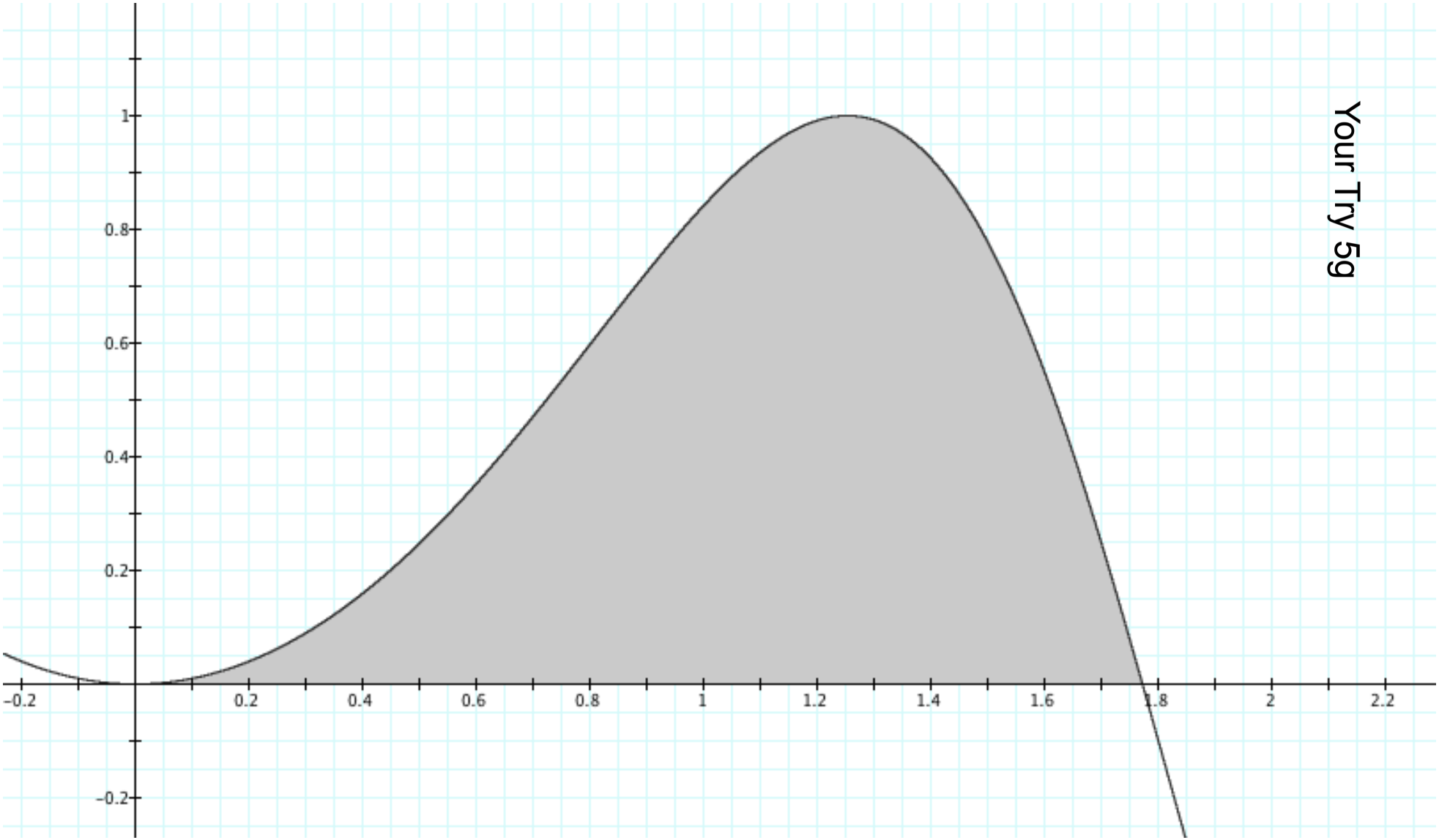
5f1) What function has $f'(x)=(\ln x)(2x)+\left(\frac{1}{x}\right)(x^2)$?

5f2) $\int (2x\ln x+x)\,dx=?$

5g) Print the attached sheet and repeat the demonstration from the video.

5h) Find the average value of $y=\sqrt{x}$ between $0\le x\le 4$.

5j) $\int_3^5 (x^2-8x-15)\,dx=?$


Your Try 5g
1
0.8
0.6
0.4
0.2
-0.2
-0.2
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
2.2

Name:_____

Calculus Finding Area with rulers, scissors and scale.

1) In class we will use rulers and scales to find the area under the curve shown below. We will also find it's area using the tricks of Calculus.

$$\int_{-1}^{2} -x^3+3x+2\,dx$$