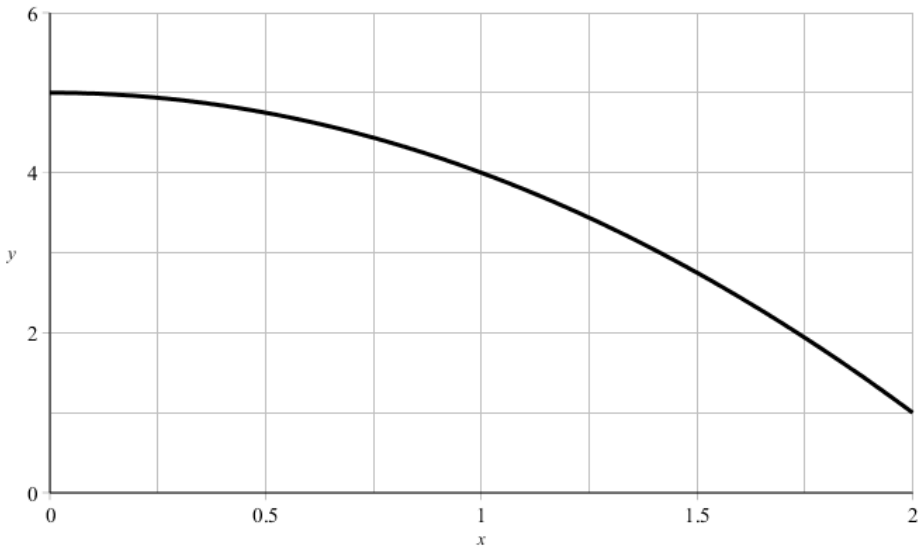
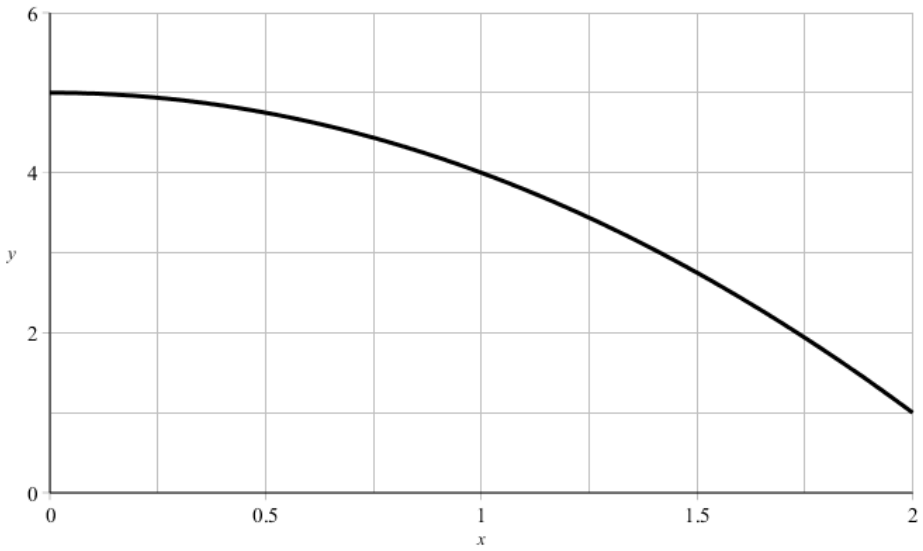
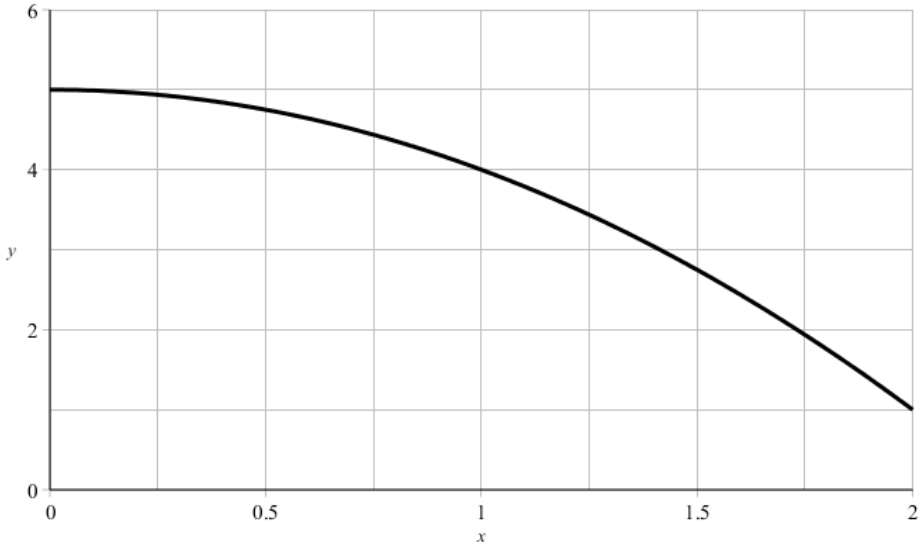
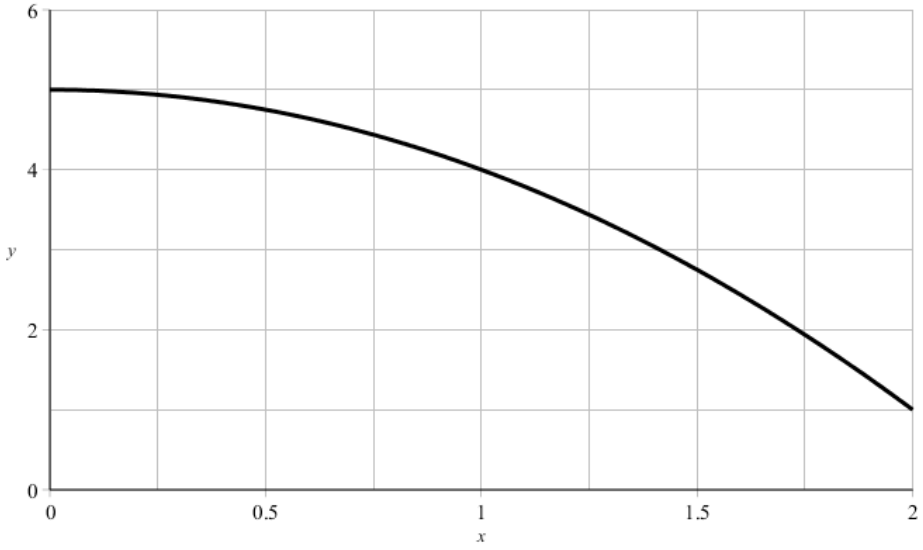
Estimate the area under the curve $f(x) = 5 - x^2$ and above the x-axis on the interval [0,2]:









Estimate the area under the curve $f(x) = 5 - x^2$ and above the x-axis on the interval [0,2]:

1. Use **4** rectangles and the ***right endpoints*** of each subinterval to find the height.

2. Use **4** rectangles and the ***left endpoints*** of each subinterval to find the height.

3. Use **4** rectangles and ***midpoints*** of each subinterval to find the height.

4. Use **8** rectangles and the ***right endpoints*** of each subinterval to find the height.

number of rectangles n	***Area Estimates***		
	Right endpoint estimate	**Left endpoint estimate**	**Midpoint Estimate**
4			
8			7.3438
16	7.0781	7.5781	7.3359
100	7.2932	7.3732	7.3334
1000	7.3293	7.3373	7.3333
10000	7.3329	7.3337	7.3333

What do you think the ***exact*** area is?