Summation Notation of Riemann Sums

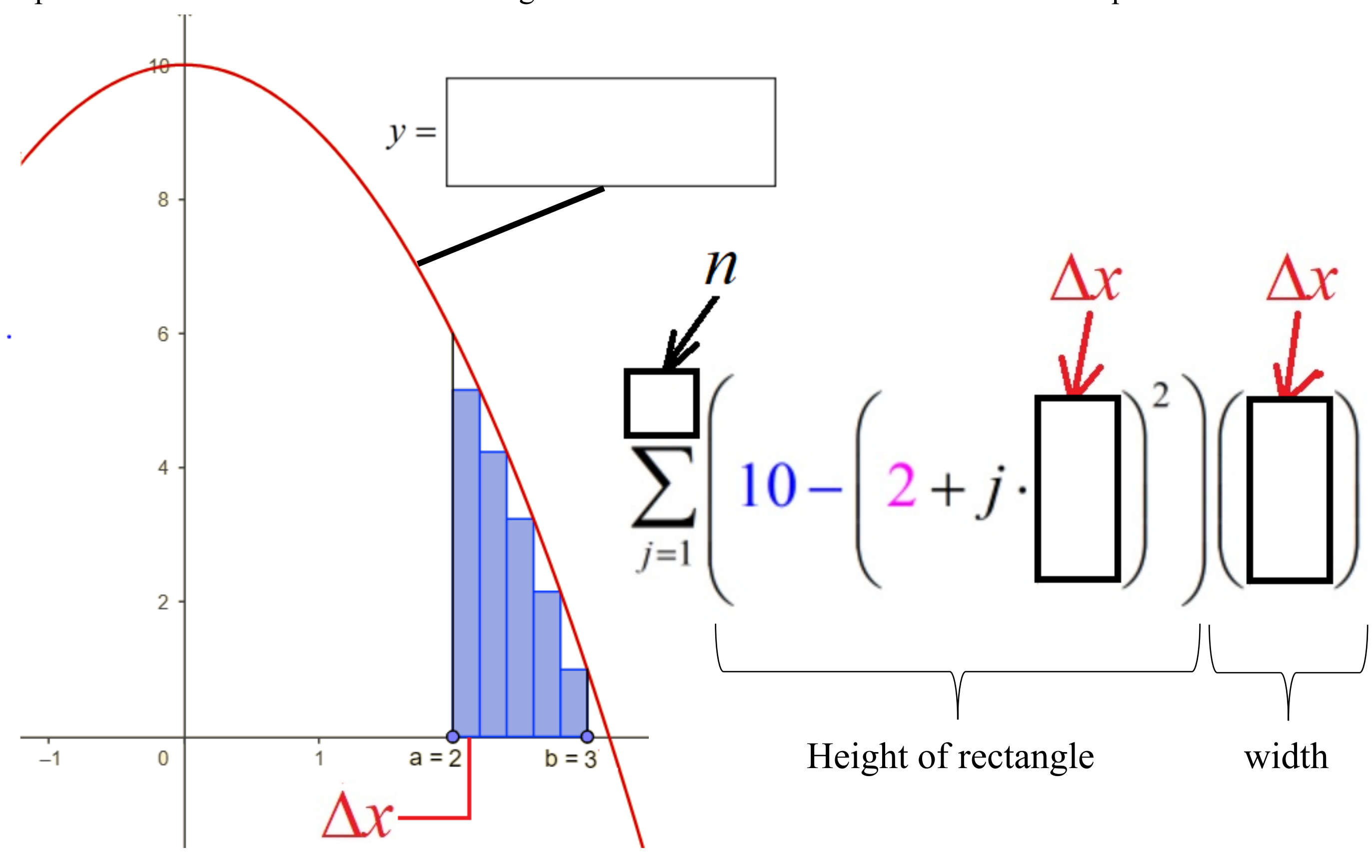
1. $$\lim_{n\to\infty}\sum_{j=1}^{n}\left(4\left(1+j\cdot\tfrac{10}{n}\right)^3+2\right)\left(\tfrac{10}{n}\right) = \int_{1}^{11}(4x^3+2)\,dx$$

2. $$\lim_{n\to\infty}\sum_{j=1}^{n}\left(\left(2+j\cdot\tfrac{5}{n}\right)^3+1\right)\left(\tfrac{5}{n}\right) = \int_{2}^{7}(x^3+1)\,dx$$

3. $$\lim_{n\to\infty}\sum_{j=1}^{n}\left(4\left(5+j\cdot\tfrac{2}{n}\right)-2\right)\left(\tfrac{2}{n}\right) = \int_{5}^{7}(4x-2)\,dx$$

4. $$\lim_{n\to\infty}\sum_{j=1}^{n}\left(3\left(2+j\cdot\tfrac{3}{n}\right)+1\right)\left(\tfrac{3}{n}\right) = \int_{2}^{5}(3x+1)\,dx$$

Complete the boxes. The area below is a right Riemann sum with $n = 5$ subintervals of equal width Δx.



If the number if subintervals n were to grow without bound, i.e., $n \to \infty$, then the sum would approach the actual area represented by

$$A = \int_{\square}^{\square}\left(\boxed{}\right)dx$$