Pre-class Questions: Sections 4.2 and 4.3

Purpose: These questions give you an easy way to start engaging with the textbook and prepare you for class. Some of the questions are meant to help with self reflection and others help test your understanding of the material.

Task: You can answer these questions as you read the section or after you've finished. As this is your first point of contact with the material, you are not expected to get everything correct, but answer to the best of your abilities.

1. Write $\sin(1) + \sin(2) + \sin(3) + \sin(4)$ in summation notation.
2. Evaluate $\sum_{i=1}^{5} 1$.
3. Evaluate $\sum_{i=1}^{5} i$.
4. Let $f(x)$ be a continuous function on an interval $[a, b]$. In the formula appearing on page 319,

$$\text{Approximate area} = \sum_{i=1}^{n} f(c_i)\Delta x,$$

   what does the value of n tell us? What are the values called c_i supposed to be? What does Δx mean? What does the quantity $f(c_i)\Delta x$ tell us? Draw a picture explaining the formula.
5. What questions do you still have about summation notation and area?