Assignment 1

Full name:

CSU ID:

1. Compute the following sums (6 points).
   a. $2 + 4 + 6 + \cdots 1024$
   b. $3 + 9 + 27 + \cdots 3^{20}$
   c. $\sum_{i=5}^{n+3} 1$
   d. $\sum_{i=5}^{n+3} i$
   e. $\sum_{i=3}^{n} 2^{i+2}$
   f. $\sum_{i=2}^{n} \sum_{j=3}^{n} (i+1)(j+2)$

2. Express the order of growth using Θ notation. The final formula should be as simple as possible (4points).
   a. $\sum_{3}^{n-3} (i^3 + 3)^3$
   b. $\sum_{2023}^{n} \lg i^{1024}$