

Homework Assignment: 1

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## 1. Summation Practice

(a)

$$\sum_{k=3}^{n+1} 1$$

(b)

$$\sum_{i=1}^{100} (4 + 3i)$$

(c)

$$\sum_{i=2}^{200} (i - 3)^2$$

(d)

$$\sum_{i=10}^{80} (i^3 + i^2)$$

(e)

$$\sum_{j=0}^{n-1} (j + 1)$$

(f) Create a summation for the following sequence:  $2+4+8+16+32+64$

$$\sum_{j=0}^{n-1} (j + 1)$$

(g) Create a summation for the following sequence:  $2+6+18+54+162$

$$\sum_{j=0}^{n-1} (j + 1)$$

(h) Create a summation for the following sequence:  $(-4)+(-1)+2+5+8+11+14$

$$\sum_{j=0}^{n-1} (j + 1)$$

## 2. Order of Growth

(a)

$$\sum_{i=2}^{n-1} \lg i^2$$

(b)

$$\sum_{i=0}^{n-1} \sum_{j=0}^{i-1} (i+j)$$