Lecture 10 Handout – Part II

**Understanding Summation Notation**

Suppose you have the following expression:

$$1 + 2+ 3 + 4 + 5 + 6+7+8$$

What is the 4th term?

What is the 8th term?

What is the ith term?

Because I am a good mathematician, I am lazy and quickly tire of having to write all those terms. Instead I will write, using summation notation,

How would you write the expression 1 + 2 + 3 + 4 + 5 , using summation notation?

What does this expression mean

$$\sum\_{i=1}^{3}i=$$

What about

$$\sum\_{i=3}^{7}i= $$

A slightly tougher one

$$\sum\_{i=1}^{n}i= $$

Here is a slightly different one

$$\sum\_{i=1}^{n}i^{2}= $$

The penultimate one

$$\sum\_{i=1}^{3}i + 4= $$

Finally the biggie

$$\sum\_{i=1}^{k}i + \left(k+1\right)= $$