I got a nice email from a Student. She asked “How do you do Partial Sums on your Calculator?” – a good question.

So here’s my answer.

Example: [Sect. 11.1: p. 831: #47] Use a Graphing Calculator to evaluate the sum. \[ \sum_{k=1}^{10} k^2 \]

Solution: (Instructions & Explanation) – You want to “Sum” a “Sequence.”

So you tell your calculator to \( \text{sum(seq)} \)

Here’s how you do this:

1. Push [2nd] [LIST] and you will see [NAMES], [OPS], [MATH].
2. Go “right arrow” [>] twice, or “left arrow” [<] once to get to the [MATH] menu.
3. Tap #5 [5: sum()]. And you see sum on your HomeScreen.
4. Push [2nd] [LIST] again and “arrow” this time to [OPS].
5. Push #5 [5:seq()]. And you now see sum(seq) on your HomeScreen.
6. You want to enter now A, B, C, D to get \( \text{sum(seq(A,B,C,D))} \)

where \( A = a_n \), is the n-th term, B is the name of the variable (the index), C is the index “start,” and D is the index “stop.”

Now I know that this problem has “k” in it, and we could use “k” on the calculator, but this is a pain in the neck. So I just use the [X↑θn] key. Thus, my HomeScreen will look like this: \( \text{sum(seq(}X^2,X,1,10)) \)

Now simply press [ENTER] and your answer, 385 pops up on the Screen.
7. \[ \sum_{k=1}^{10} k^2 = 385. \]

Example: [Sect. 11.1: p. 831: #49] Same Instructions. \[ \sum_{j=1}^{20} j^2 (1 + j) \]

Solution:

1. Your Calculator Screen looks like this:
   
   ![Calculator Screen](image)

2. Your Answer is this:
   
   \[ \therefore \sum_{j=7}^{20} j^2 (1 + j) = 46438. \]