I.3 Partial Sums

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Math 361B

February 9, 2019

The partial sum I created is $an = \sum_{i=1}^{N} \frac{(-1)^i}{i*^{0.6}}$ which appears to converge to -0.62 around when $N = 27500$.

$sn = \sum_{i=1}^{N} \frac{ln(i^4+ii+3)}{i^{1/2}+3}$

I think that the partial sum sn converges to approximately 18000. I experimented with different N values and found that I got an error message when I tried to make $N = 100000$ so I continued to experiment with different N-values to see what the highest value of N is that wouldn't produce an error and I got a maximum N-value of about 65500. At $N = 65500$ the last five values of sn are 17978.14, 17978.31, 17978.49, 17978.66, 17978.83 so I felt confident to say that sn converges to approximately 18000.

$tn = \sum_{i=1}^{N} \frac{e^{i/100}}{i^{10}}$

I think that the partial sum tn diverges. when testing different values of N it appears as though the partial sum is oscillating with and increasing amplitude until $N => 70979$ then all of the partial sums are equal to Inf, which means that the maximum and minimum values are approaching infinity.