Partial Sums and Partial Products

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1 Partial Sums

Created series: $r_n = \sum_{i=1}^{n} \frac{ln(i^2)}{\sqrt{i+1}}$

I think this series diverges since the beginning terms are increasing steadily, and the last terms are still increasing, even when I increase N. I used 10,000 terms to come to my conclusion. When I increased the terms to 19,000, the last 15 terms were still increasing.

2 Partial Products

Created series: $m_n = \prod_{i=1}^{n} \frac{e^{i/2}}{\sqrt{i}}$

I think this series diverges since the first 15 terms steadily increase, and the last 15 terms all reach infinity. I used 100 terms to reach my conclusion since it was very clear that the series would diverge since it reaches infinity (no need to increase it).