In the following create partial sums from the sequences. First make **a** into a function and then create the partial sums **s**. Use the **add** function instead of the **sum** function. It is safer. Do the sums converge or not? Explain why.

1. Let a be the sequence $1, \frac{1}{2}, \frac{1}{3}, \dots$ where the nth term is $\frac{1}{n}$. 2. Let a be the sequence 1, $\frac{1}{4}$, $\frac{1}{9}$, where the nth term is $\frac{1}{2}$ 3. Let *a* be the sequence $\frac{1}{\ln(1)}$, $\frac{1}{\ln(2)}$, $\frac{1}{\ln(3)}$. . where the nth term is $\frac{1}{\ln(n)}$ 4. Let a be the sequence $\frac{1}{1}$, $\frac{1}{2}$, $\frac{1}{3}$... where the nth term is $\frac{1}{n}$. 5. Let a be the sequence $88 \cdot \left(\frac{4}{5}\right)$, $88 \cdot \left(\frac{4}{5}\right)^2$, $88 \cdot \left(\frac{4}{5}\right)^3$. . where the nth term is $88 \cdot \left(\frac{4}{5}\right)^n$ 6. Let a be the sequence 2, $\frac{2^2}{2!}$, $\frac{2^3}{3!}$, $\frac{2^4}{4!}$,... $\frac{2^n}{n!}$... 7. Let a be the sequence 1, -1, 1, -1, 1, -1 where the nth term is $(-1)^{n+1}$

8. Let the sequence be
$$1, -\frac{1}{2}, \frac{1}{3}, -\frac{1}{4}, \frac{1}{5} \dots \frac{(-1)^{n+1}}{n}$$

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