Expectation Value Strategy

1. Sample space? Relevant random variable X?
2. Write X as a sum of indicator random variables
   - Create indicator random variables associated with events that cause X to increase.
3. Use linearity of expectation
4. Use $\mathbb{E}[X_E] = \Pr(E)$

Expectation Value Strategy

Suppose we create a string of length n consisting of the digits $1, 2,$ and 4, where
Pr(jth digit is 1)=$1/j$
Pr(jth digit is 2)=$(1 - 1/j)/2$
Pr(jth digit is 4) $= (1 - 1/j)/2$
What is the average (expected value) of the sum of digits in the string?