Math 1190 Quiz #7

Problem 1: Approximate, accurate to the nearest integer, the value of the sum
\[ \sum_{i=1}^{24} a^i + ia \]
when \( a = \frac{2}{3} \).

Problem 2: Define a sequence \( \{a_n\} \) by letting \( a_n \) be the nearest integer to \( \sqrt{n} \). Determine the value of
\[ \frac{1}{a_1} + \frac{1}{a_2} + \frac{1}{a_3} + \cdots + \frac{1}{a_{2008}}. \]
Problem 1: Approximate, accurate to the nearest integer, the value of the sum

$$\sum_{i=1}^{24} a^i + ia$$

when $a = \frac{2}{3}$.

Solution:
Problem 2: Define a sequence \( \{a_n\} \) by letting \( a_n \) be the nearest integer to \( \sqrt{n} \). Determine the value of 
\[
\frac{1}{a_1} + \frac{1}{a_2} + \frac{1}{a_3} + \cdots + \frac{1}{a_{2008}}.
\]

Solution: