

MAA Metro NY
October 2025
Problem of the Month
Proposed by Dr. Asher Roberts, Saint Joseph University

The Problem:

Write the infinite sum

$$1 + \frac{1}{4} + \frac{1}{9} + \frac{1}{16} + \frac{1}{25} + \frac{1}{36} + \cdots$$

as an infinite product of fractions of the form $\frac{n}{m}$, where n and m are different numbers in each fraction, but always satisfy $n = m + 1$.