# Pi Mu Epsilon Problem of the Month April 2024 

## Part I:

Separate the integers 1 through 8 into two disjoint four-member sets $A$ and $B$ such that the 6 sums of pairs of elements of $A$ are identical with the 6 sums of pairs of elements of set B.

## Part II:

Separate the integers 1 through 16 into two disjoint eight-member sets $A$ and $B$ such that the 28 sums of pairs of elements of $A$ are identical with the 28 sums of pairs of elements of set $B$.

Problem of the Month Rules:
H Submissions must include a complete mathematical justification along with the answer.
$\mathscr{H}$ Submissions may only be made by individuals or groups of two and must be dated.
$\mathscr{H}$ Due date: April 23, 2024 before 5 p.m. to one of Drs. Poplin, Shoenthal, Ledford, or Hoehner.
To get your own copy, please visit:
http://www.longwood.edu/mathematics/

