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:

- **#** Submissions must include a complete mathematical justification along with the answer.
- **#** Submissions may only be made by individuals or groups of two and must be dated.
- **#** Due date: April 23, 2024 before 5 p.m. to one of Drs. Poplin, Shoenthal, Ledford, or Hoehner.

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