## Pi Mu Epsilon Problem of the Month November 2022

Starting with the number 1, we can create a counterclockwise spiral by inserting the *smallest* positive integer such that each row, each column, and each diagonal contains distinct (different) numbers.

The first 11 terms of the spiral look like this, starting with the underlined 1:



The number 6 first shows up in the term 9. In what term is the first time that the number 13 shows up?

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: November 28, 2022 before 5 p.m. to one of Drs. Poplin, Shoenthal, Ledford, or Hoehner.

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