

Pi Mu Epsilon Problem of the Month

April 2025

This month, there are three different puzzles! A complete solution to this month's PotM requires a solution to all three puzzles.

Puzzle instructions:

Puzzle 1: Consider four regular six-sided dice. Each side of each die has a different letter (for a total of 24 letters). The dice are rolled to form the words in the table below. Use the words to determine which letters are on each die. When writing the solution, list the letters on each die in alphabetical order, and number each die so that the first letter of each successive die is "after" the first letter of all previous dice.

AVID	AXLE	BRAG	COWS	DUTY
FLAG	GRIT	HUGE	ONLY	OWLS
PEGS	PRAY	WHIM	YOLK	ZEAL

Puzzle 2: Instead of four six-sided dice, we would use five "five-sided" dice. Each of the 25 sides in this puzzle has a different letter. Below are words formed after rolling five such dice. Determine which letters are on each die.

BRADS	CAPER	CHORE	COAST	CRAZY
FACED	FLAWS	INKED	JOWLS	JUMPS
QUOTA	VINYL	WEIGH		

Puzzle 3: The directions to this puzzle are the same as Puzzle 1. However, this puzzle is hypothesized to be the smallest set of words (11) that gives a unique solution to the puzzle with four six-sided dice, with no repeated letters. In other words, there is no set of ten words that would solve a dice puzzle like that in Puzzle 1 and Puzzle 3.

AXIS	CUBE	FOCI	GRAY	GRID	MATH
OVAL	PLUM	SKEW	TWIN	ZERO	

Problem of the Month Rules:

- ⌘ Submissions must include a complete mathematical or logical justification along with the answer.
- ⌘ Submissions may only be made by individuals, or groups of two, and must be dated.
- ⌘ Due date: April 25, 2025, before 5 p.m. to Dr. Phillip Poplin, Dr. David Shoenthal, Dr. Steven Hoehner, or Dr. Jeff Ledford.

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