Pi Mu Epsilon Problem of the Month
April 2022

Consider four distinct digits in the range 0-9: *a, b, c, d*. These four digits satisfy the following equation:

$$0.\overline{abab} + 0.\overline{cbcb} + 0.\overline{cdbcdb} = \frac{14}{37}.$$

Find the four digits.

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

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