

Pi Mu Epsilon

Problem of the Month February 2023

Consider the three numbers $x=310882$, $y=282164$, and $z=251537$.

Find a number, d , with d between 2 and 20,000, so that the remainder is the same when each of the numbers x , y , and z is divided by d .

Example: the number $d=5$ is NOT the answer since the three remainders are 2, 4, and 2 respectively, and the three numbers are not the same.

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: February 24, 2023 before 5 p.m. to one of Drs. Poplin, Shoenthal, Ledford, or Hoehner.

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