



Problem of the Week

Problem E

A Small Subset

There are 90 000 five-digit positive integers. However, only some of these five-digit integers satisfy the following conditions:

- the middle digit is 0,
- the ten thousands digit and the tens digit are equal,
- the thousands digit and the ones (units) digit are equal, and
- the number has exactly 5 prime factors. All of these prime factors are odd and none are repeated.

Determine all five-digit positive integers that satisfy the given conditions.

