



Problem of the Week Grade 11 and 12

Endless Possibilities?

The digits 1, 2, 3, 4, and 5 are each used once to create a five digit number $abcde$ which satisfies the following conditions:

- (i) the three digit number abc is odd;
- (ii) the three digit number bcd is divisible by 5; and
- (iii) the three digit number cde is divisible by 3.

Determine every five digit number formed using each of the digits 1 to 5 exactly once that satisfies all three conditions.

