



## Problem of the Week Grade 9 and 10

### A Number in a Haystack

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

- (i) the three digit number  $abc$  is divisible by 4;
- (ii) the three digit number  $bcd$  is divisible by 5; and
- (iii) the three digit number  $cde$  is divisible by 3.

Find all five digit numbers formed, using each of the digits 1 to 5 exactly once, that satisfy all three conditions.

**1** **2** **3** **4** **5**

