

# Problems for CSE 2010 Summer Camp

Thursday 10 June

1. Find all integers  $n$  whose usual decimal notation uses each of the ten digits  $0, 1, 2, \dots, 9$  precisely once and where, for each  $d = 1, 2, \dots, 10$ , the integer you get by writing down the first  $d$  digits of  $n$  (in their original order) is a multiple of  $d$ . (For instance, 8473591260 does not have this property: 847 is not a multiple of 3 and 8473 is not a multiple of 4 and 847359 is not a multiple of 6.)

This is routine with a computer and fun without it.