ACSL

American Computer Science League

2013 - 2014 **Contest #4**

ACSL NUMBLE
Senior Division

Problem: From Wikipedia, the free encyclopedia:

Numble is a 1965 board game published by Selchow and Righter which is very similar to Scrabble. Instead of forming words, players form sequences adhering to certain arithmetic and numerical constraints.

Each tile in ACSL Numble has a single digit, 0 through 9. A "word" in ACSL Numble is a string of digits in numerical order (high to low), except that a zero is allowed at each end, with duplicate digits allowed (except for having more than one zero at either end), and where the sum of the digits is a multiple of 5. For example, 0763220 is a valid word, as is 76322.

INPUT: There will be 6 lines of input. The first line will contain 3 character strings of 7 digits (0 - 9). Lines 2 - 6 will contain 5 integers that represent three lengths and 2 crossing digits.

OUTPUT: For input line lines 2 - 6, calculate in numerical order the character string of the stated length that produces the largest sum of the digits that is a multiple of 5 for the 3 given strings. Print the strings with the first string horizontal, the second string vertical and crossing the first string at the first given crossing digit and the third string vertical and crossing the first string at the second given crossing digit.. We guarantee that there will be no ties in the calculation for the largest sum of the given lengths (except those caused by repeated digits) and that a sum of the given length will exist.

SAMPLE INPUT

1. 9768014, 6874514, 9655532
2. 7, 7, 5, 7, 6
3. 6, 5, 3, 6, 9
4. 5, 6, 4, 6, 9
5. 4, 5, 4, 8, 6
6. 6, 6, 4, 4, 6