

ACSL

American Computer Science League

ACSL NUMBLE

Intermediate Division

2013 - 2014
Contest #4

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) with duplicate digits allowed except for 0 (only one 0 is allowed) and where the sum of the digits is a multiple of 5. For example, 7611 is a valid word, as is 763310.

INPUT: There will be 6 lines of input. The first line will contain 2 character strings of 7 digits (0 - 9) Lines 2 - 6 will each contain 3 integers. The first integer will be the length to use for the first string. The second integer will be the length to use for the second string. The third integer is the crossing digit.

OUTPUT: For input 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 2 given strings. Print the strings with the first string horizontal, the second string vertical and crossing at the first occurrence of the given digit. We guarantee that there will be no ties in the calculation for the largest sum of the given lengths and that a sum of the given length will exist.

SAMPLE INPUT

1. 9768014, 6874514

2. 7, 7, 7

3. 6, 5, 6

4. 5, 6, 6

5. 4, 5, 8

6. 6, 6, 4

1.

9 8 7 6 4 1 0

6

5

4

4

1

3. 8

7

9 8 7 6 0

4

4

1

4.

9 8 7 6

7

6

5

4

8

7

6 4 1

5

4

8

7

6

4 1

4

1

2.

9 8 7 6 4 1

5

4

8

7

6

4 1

4

1

5. 7

6

9 8 7 6 4 1

4

1

5.

7

6

4 1

4

1

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TEST DATA

TEST INPUT

TEST OUTPUT

1. 9342610, 6438527
2. 7, 7, 6
3. 6, 6, 4
4. 6, 5, 4
5. 2, 7, 6
6. 6, 5, 4

1.

8							
7							
9	6	4	3	2	1	0	
5							
4							
3							
2							

2.

8							
7							
6							
9	6	4	3	2	1		
3							
2							

3.

8							
7							
6							
5							
9	6	4	3	2	1		

4.

8							
7							
9	6						
5							
4							
3							
2							

5.

8							
7							
6							
5							
9	6	4	3	2	1		