**PROBLEM**: Similar to Contest #2, this program requires you to take a string of digits and print out an increasing sequence of positive integers separated by a single space. The rules for computing the sequence of numbers is, however, a bit different, as we’ll describe in a moment.

**INPUT:**  There will be 10 lines of input. Each line will contain a string of digits. The length of the string will be between 2 and 128 inclusive.

**OUTPUT**: Each output will be a sequence of ascending positive integers, separated by a single space. The first number in the series is number comprising *n* digits, where *n* is the first digit of the input string. That number is not part of the string of digits to use! Numbers to be output are formed by selecting digits from the string, using each digit just once, so as the next integer is larger than the previous one. Ignore any leftover digits. Leading zeroes are never part of a number in the output series. We guarantee that there will always be at least one number in the output sequence.

In Sample Input #1, the first digit, a 2, indicates that the first integer in the output sequence will be 2 digits. The smallest 2-digit number is 12. The 12 is the first number in the sequence. Now search the remaining digits of the string to find the next largest integer that can be formed from the numbers 575859. The two 5s are combined to form 55. Those 5s can’t be used again. There is a third 5 that can be combined with the 7 to form 57, the next number in the sequence. The remaining digits 8 and 9 are combined to form 89. The digits are all used. If there are digits left that can’t be combined to add to the ascending sequence, those digits are ignored.

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| **SAMPLE INPUT:**   1. 225758519 2. 331415929653589 3. 220162017 4. 119782017 5. 3144 6. 521431081765107510702 7. 3212112111211112 8. 144 9. 41021324354 10. 73201564 | **SAMPLE OUTPUT:**   1. 12 55 57 89 2. 112 334 555 689 3. 10 12 20 67 4. 1 2 7 8 9 5. 144 6. 10000 11112 23455 67778 7. 111 112 121 122 211 8. 4 9. 1012 2334 10. 1023456 |

**TEST DATA**

***Each answer is a series of numbers, separated by a space. The numbers must appear in the order shown, with no extra numbers and no missing numbers.***

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| **TEST INPUT:**   1. 3271828182 2. 240527563545 3. 4112358132134 4. 30001 5. 5149162536 6. 3888888 7. 509302 8. 110203040 9. 29876543210 10. 200022334 | **TEST OUTPUT:**   1. 112 227 888 2. 20 34 45 55 56 3. 1111 2233 3458 4. 100 5. 11234 6. 888 7. 20039 8. 1 2 3 4 9. 10 23 45 67 89 10. 20 23 30 40 |