**PROBLEM**: Given a large number, find the value when its digits change places to produce the following:

1. The smallest possible number.
2. The largest possible number.
3. The 50th largest possible number.
4. The *k*th smallest possible number. You’ll be given the value of *k*.
5. The number closest to the mean of the first two answers above. By “closest”, use the absolute value. For example, 7 is closer to 10 than 14 is.

**INPUT:** One large integer (fewer than 18 digits), followed by *k*, a positive integer.

**OUTPUT**: Print the 5 numbers as listed above. Do not print any leading 0s.

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| **SAMPLE INPUT:**   1. 20162017, 127 | **SAMPLE OUTPUT:**   1. 112267 2. 76221100 3. 76102201 4. 612271 5. 27621100 |

**TEST DATA**

***Answers must match the output exactly as shown.***

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| **TEST INPUT:**   1. 310320380, 841 | **TEST OUTPUT:**   1. 123338 2. 833321000 3. 833103020 4. 10023338 5. 383321000 |