Change Digits

PROBLEM: Given a positive integer, change the integer according to the following rules:
1. Find the median of the digits. Find the digit closest to the median that is not larger than the median. If that digit appears more than once, the left most occurrence will be the digit used below.
2. If that digit is a 0 or a 1 or a 2, replace it with the largest digit in the integer.
3. If that digit is a 3 or a 4 or a 5, replace it with the smallest digit in the integer.
4. If that digit is a 6 or a 7 or an 8, replace it with the sum of the digits. If the sum is >9, use the ones digit of the sum.
5. If that digit is a 9, replace it with a 0.

INPUT: There will be 5 inputs. Each input will be a positive integer less than 100,000.

OUTPUT: Print the new integer. There will be no spaces between the printed digits.

SAMPLE INPUT   SAMPLE OUTPUT

1. 123   1. 133
2. 745   2. 744
3. 1689   3. 1489
4. 9999   4. 999 (note: 0999 is not correct)

Reminder: Please note that the ACSL rules state that you must work alone on the programming problem. You must give your advisor a copy of your code within 72 hours. Note that your program must accept and print all data in **ONE** run of the program. If the program stops, no further data may be entered by starting the program again. Good Luck!