DWITE Online Computer Programming Contest
February 2006

Problem 3

UPC Check Digit

The final digit of a Universal Product Code is a check digit computed so that summing the even-numbered digits, plus 3 times the odd-numbered digits, modulo 10, is 0.

For example, take the UPC 070617006092. The sum of even numbered digits is 7+6+7+0+0+2 = 22, and the sum of the odd-numbered digits is 0+0+1+0+6+9 = 16. The total sum is 22+3×16 = 70 = 0 modulo 10. So the code is valid.

The input file (**DATA31.txt** for the first submission and **DATA32.txt** for the second submission) will five lines of data. Each line will contain a 12 digit UPC code that has an invalid check digit.

The output file (**OUT31.txt** for the first submission and **OUT32.txt** for the second submission) will contain five lines of data. Each line will contain the UPC code with the correct check digit.

Sample Input	**Sample Output**
070617006093 036000291455 123456789097 246809753116 543210987665	070617006092 036000291452 123456789098 246809753116 543210987667

http://en.wikipedia.org/wiki/Check_digit