

DWITE '06 R5 #3 - UPC Check Digit

Time limit: 0.6s **Memory limit:** 16M

DWITE Online Computer Programming Contest, February 2006, Problem 3

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 the 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 $22 + 3 \times 16 = 70 \equiv 0 \pmod{10}$. So the code is valid.

The input will contain five lines of data. Each line will contain a 12 digit UPC that may have an invalid check digit.

The output will contain five lines of data. Each line will contain the UPC with the correct check digit.

Sample Input

```
070617006093
036000291455
123456789097
246809753116
543210987665
```

Sample Output

```
070617006092
036000291452
123456789098
246809753116
543210987667
```