UVa Online Judge

10396 Vampire Numbers

A number $v = x * y$ with an even number (n) of digits formed by multiplying a pair of $n/2$-digit numbers (where the digits are taken from the original number in any order) x and y together is known as vampire number. Pairs of trailing zeros (both the numbers have a trailing zero) are not allowed. If v is a vampire number then x and y are called its "fangs."

Examples of 4-digit vampire numbers include

1) $21 \times 60 = 1260$
2) $15 \times 93 = 1395$
3) $35 \times 41 = 1435$
4) $30 \times 51 = 1530$
5) $21 \times 87 = 1827$
6) $27 \times 81 = 2187$
7) $80 \times 86 = 6880$

In this program you will have to find all the 4, 6 and 8 digit even vampire numbers.

Input

The input file contains maximum ten lines of input. Each line contains a single integer n whose value is 4, 6 or 8. Input is terminated by end of file.

Output

For each input n produce all the n-digit vampire numbers that are even in ascending order. Print a blank line after the output for each set of input.

Sample Input

```
4
4
```

Sample Output

```
1260
1530
6880

1260
1530
6880
```