

2001-2002

American Computer Science League

All-Star

**1. ACSL THE JUNIOR VAMPIRE SLAYER
5 POINTS**

PROBLEM: A vampire number is any even digit integer that can be written as the product of two factors with the following property: each factor must consist of half the original digits in any order and no factor can be a multiple of 100. Each such factor is called a fang. As an example:

$$1260 = 21 \times 60$$

INPUT: There will be 5 inputs. Each input will be an even digit integer with at most 6 digits. Each must be entered as a single integer.

OUTPUT: For each input, print out its fangs (all pairs). If none exist, print NONE. Do not print like pairs in the reverse order. A reminder – if you choose to have this program tested at the end of the contest, as per ACSL rules, it has a 10- minute time limit to input and output all data. Further, programs started before 12:30 PM must be completed by 12:40 PM.

SAMPLE INPUT

1. 1260
2. 125460

SAMPLE OUTPUT

1. 21,60
2. 204, 615 and 246, 510