The short story titled *Coconuts*, by Ben Ames Williams, appeared in the *Saturday Evening Post* on October 9, 1926. The story tells about five men and a monkey who were shipwrecked on an island. They spent the first night gathering coconuts. During the night, one man woke up and decided to take his share of the coconuts. He divided them into five piles. One coconut was left over so he gave it to the monkey, then hid his share and went back to sleep.

Soon a second man woke up and did the same thing. After dividing the coconuts into five piles, one coconut was left over which he gave to the monkey. He then hid his share and went back to bed. The third, fourth, and fifth man followed exactly the same procedure. The next morning, after they all woke up, they divided the remaining coconuts into five equal shares. This time no coconuts were left over.

An obvious question is "how many coconuts did they originally gather?" There are an infinite number of answers, but the lowest of these is 3,121. But that's not our problem here.

Suppose we turn the problem around. If we know the number of coconuts that were gathered, what is the maximum number of persons (and one monkey) that could have been shipwrecked if the same procedure could occur?

Input

The input will consist of a sequence of integers, each representing the number of coconuts gathered by a group of persons (and a monkey) that were shipwrecked. The sequence will be followed by a negative number.

Output

For each number of coconuts, determine the largest number of persons who could have participated in the procedure described above. Display the results similar to the manner shown below, in the Sample Output. There may be no solution for some of the input cases; if so, state that observation.

Sample Input

```
25
30
3121
-1
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Sample Output

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25 coconuts, 3 people and 1 monkey
30 coconuts, no solution
3121 coconuts, 5 people and 1 monkey
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