In the magical land of Byteland, there are three kinds of citizens:

* a Bit - 2ms

 after a Bit appears, it grows up and becomes a Nibble (i.e. it disappears and a Nibble appears)

 a Nibble - 8ms

 after a Nibble appears, it grows up and becomes a Byte

 a Byte - 16ms

* after a Byte appears, it grows up, splits into two Bits and disappears

Chef wants to know the answer to the following question: what would the population of Byteland be immediately before the time *N*ms

if only 1 Bit appeared at time 0ms

?

Help him and find the population (number of citizens) of each type.

**Input**

* The first line of the input contains a single integer *T*

denoting the number of test cases. The description of *T*

 test cases follows.

 The first and only line of each test case contains a single integer *N*

* .

**Output**

For each test case, print a single line containing three space-separated integers — the number of Bits, Nibbles and Bytes.

**Constraints**

* 1≤*T*≤104

  1≤*N*≤1,600

**Subtasks**

**Subtask #1 (25 points):** 1≤*N*≤140

**Subtask #2 (75 points):** original constraints

**Example Input**

2

2

3

**Example Output**

1 0 0

0 1 0

**Explanation**

Immediately before the time 2ms

, there is only one Bit. At 2ms, this Bit grows up, so immed, there is only one Nibble in Byteland.