## Electron Distribution

*You are a mad scientist and you have decided to play with electron distribution among atom's shells. You know that basic idea of electron distribution is that electrons should fill a shell until it's holding the maximum number of electrons.*

You will receive a single integer – **number of electrons**. Your task is to **fill shells** **until there are no more electrons** **left**. The **rules** for electron distribution are as follows:

* The maximum number of electrons in a shell can be **2n2**, where **n** is the **position** of a **shell** (**starting from 1**). For example, the maximum number of electrons in the **3rd** shield can be **2\*32 = 18**.
* You should start **filling** the shells from the **first one** at the first position.
* If the electrons are enough to **completely fill** the **first** shell, the left **unoccupied electrons** should fill the **next** shell and so on.

At the end, **print a list with the filled shells**.

### Example

|  |  |
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| **Input** | **Output** |
| 10 | [2, 8] |
| 44 | [2, 8, 18, 16] |