



**ALGERIAN OLYMPIAD IN INFORMATICS**

**2024 Summer Camp Final Exam**

September 19<sup>th</sup>, 2024

*Task 3 - Assil vs Ramses II*

*English Version*

*This task is worth 100 points*

### Task 3 : Assil vs Ramses II

The Algerian team for the IOI discovered at the Grand Egyptian Museum (GEM) that the pharaohs loved to build pyramids to demonstrate their power. Inspired by this, Assil decides to build his own pyramid in his garden using cardboard boxes. He has exactly  $n$  cubic cardboard boxes at his disposal and cannot obtain any more. The style of the pyramid is described in the drawing below. Write a Python program that receives the number of cardboard boxes Assil has, and calculates the maximum height of the pyramid he can build as well as the number of boxes that will remain after the construction. In other words, the program should receive the number of cardboard boxes Assil has, then output on one line the height of the pyramid, and on the following line the number of remaining boxes.

#### Examples

Input	Output	Input	Output	Input	Output	Input	Output
4	1 3	6	2 1	9	2 4	14	3 0

