

Loving You in My Humble Way

Input file: *standard input*
Output file: *standard output*
Time limit: 1 second
Memory limit: 1024 mebibytes

This is an output-only problem.

You need to construct a 3-uniform hypergraph with 1893 vertices and at least 13 244 edges such that the graph does not contain any of BC_2 , BC_3 , or BC_4 .

A 3-uniform hypergraph is a pair (V, E) where each edge (element of E) is a set of **three** distinct vertices from V .

A BC_k consists of k distinct vertices v_1, v_2, \dots, v_k and k distinct edges e_1, e_2, \dots, e_k such that $v_i \in e_i \cap e_{i \bmod k+1}$.

Input

There is no input for this problem.

Output

The first line should contain a positive integer m : the number of edges.

Each of the next m lines should contain three integers: the vertices that form an edge of the hypergraph. The order of edges and the order of vertices in each edge can be arbitrary.

To get accepted, you must output a solution with $m \geq 13\,244$.

Example

<i>standard input</i>	<i>standard output</i>
<no-input>	3 1 2 3 3 4 5 5 6 7

Note

The sample output is given only to demonstrate the output format. It is a correct solution with 3 edges, but you need to construct a solution with at least 13 244 edges.