

Time Limit: - 1 sec

A mesh network is a network topology in which each node relays data for the network. All mesh nodes cooperate in the distribution of data in the network.

Mesh networks can relay messages using either a flooding technique or a routing technique. With routing, the message is propagated along a path by hopping from node to node until it reaches its destination. To ensure all its paths' availability, the network must allow for continuous connections and must reconfigure itself around broken paths, using self-healing algorithms such as Shortest Path Bridging. Self-healing allows a routing-based network to operate when a node breaks down or when a connection becomes unreliable. As a result, the network is typically quite reliable, as there is often more than one path between a source and a destination in the network. Although mostly used in wireless situations, this concept can also apply to wired networks and to software interaction.

A mesh network whose nodes are all connected to each-other is a fully connected network. Fully connected wired networks have the advantages of security and reliability: problems in a cable affect only the two nodes attached to it. However, in such networks, the number of cables, and therefore the cost, goes up rapidly as the number of nodes increases.

Now give you N computers. You have to tell how many connections required creating a fully connected network?

Input

At first gives you an integer T ($T \leq 1000$), is the number of test cases. Each case gives you an integer X ($1 \leq X \leq 1000$).

Output

For every test case, print minimum connections required to make a fully connected network.

Sample Input

2

3

5

Sample Output

3

10

Look, for 3 computers how we can create a fully connected network.

