**Algorithms with Java: Exam Preparation**

This document defines the exam preparation for ["Algorithms – Fundamentals (Java)" course @ Software University](https://softuni.bg/trainings/2991/algorithms-fundamentals-with-java-may-2020). Please submit your solutions (source code) of all below described problems in [Judge](https://judge.softuni.bg/Contests/Practice/Index/2481#0).

1. **Monkey Business**

*So nothing to do right? But how is that even possible. No matter what there is always something to be done and you never get bored doing the Monkey Business.*

You have found a number **N** and now you want to see in how many ways you can combine the numbers from **1 to N** in such a way that **by using addition or subtraction you will end up with zero** as a result. Find the possible **expressions** print them on the console each on a new line then followed by the total number of solutions in the following format:

* **Total Solutions: {possibleSolutions}**

## Input

* The input will come from the console on single line.

## Output

* The output is each expression on a new line followed by the total solutions **see the examples below.**

## Constraints

* **The input will only be a single positive integer.**
* The input will be in the range **[1…25]**

## Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 4 | +1 -2 -3 +4  -1 +2 +3 -4  Total Solutions: 2 |
| 8 | +1 +2 +3 +4 -5 -6 -7 +8  +1 +2 +3 -4 +5 -6 +7 -8  +1 +2 -3 +4 +5 +6 -7 -8  +1 +2 -3 -4 -5 -6 +7 +8  +1 -2 +3 -4 -5 +6 -7 +8  +1 -2 -3 +4 +5 -6 -7 +8  +1 -2 -3 +4 -5 +6 +7 -8  -1 +2 +3 -4 +5 -6 -7 +8  -1 +2 +3 -4 -5 +6 +7 -8  -1 +2 -3 +4 +5 -6 +7 -8  -1 -2 +3 +4 +5 +6 -7 -8  -1 -2 +3 -4 -5 -6 +7 +8  -1 -2 -3 +4 -5 +6 -7 +8  -1 -2 -3 -4 +5 +6 +7 -8  Total Solutions: 14 |

*"In the beginning there was nothing, which exploded."*