Mirko works in a sugar factory as a delivery boy. He has just received an order: he has to deliver **exactly N** kilograms of sugar to a candy store on the Adriatic coast. Mirko can use two types of packages, the ones that contain **3 kilograms**, and the ones with **5 kilograms** of sugar.

Mirko would like to take as few packages as possible. For example, if he has to deliver 18 kilograms of sugar, he could use six 3-kilogram packages. But, it would be better to use three 5-kilogram packages, and one 3-kilogram package, resulting in the total of four packages.

Help Mirko by finding the minimum number of packages required to transport **exactly N** kilograms of sugar.

INPUT

The first and only line of input contains one integer **N** ($3 \leq \mathbf{N} \leq 5000$).

OUTPUT

The first and only line of output should contain the minimum number of packages Mirko has to use. If it is impossible to deliver exactly **N** kilograms, output -1.

SAMPLE TESTS

input	**input**	**input**
4	9	18
output	**output**	**output**
-1	3	4