

DOUBT SESSION

—
**ASK
YOUR DOUBTS**



ARRAYS

SEARCHING

SORTING



Person is judged not by his answer, but by his QUESTION

It's another beautiful day on Farmer John's farm.

After Farmer John arrived at his farm, he counted n legs. It is known only chickens and cows live on the farm, and a chicken has 2 legs while a cow has 4.

What is the minimum number of animals Farmer John can have on his farm assuming he counted the legs of all animals?

Input

The first line contains single integer t ($1 \leq t \leq 10^3$) — the number of test cases.

Each test case contains an integer n ($2 \leq n \leq 2 \cdot 10^3$, n is even).

Output

For each test case, output an integer, the minimum number of animals Farmer John can have on his farm.

Example

input

Copy

3
2
6
8

output

Copy

1
2
2

$$N = 2$$

chicken = 1

$$N = 4$$

all chicken = c_1 $c_2 = 2$ Animals
cows = $c_{ow_1} \Rightarrow$ 1 Animal

$$N = 8$$

all chicken = c_1 c_2 c_3 $c_4 \Rightarrow 4$ Animals
all cows = c_{ow_1} $c_{ow_2} \Rightarrow$ 2 Animals

$$N = 10$$

all chickens = c_1 c_2 c_3 c_4 $c_5 = 5$ Animals
cows = c_{ow_1} $c_{ow_2} + c_1 =$ 3 Animals

chicken (2)
cows (4)

farm (2 Animals)

$$N = 12$$

$$\text{Cows} = 4$$

$$\text{Chick} = 2$$

$$\text{Cows} = C_1 \quad C_2 \quad C_3 = \underline{3 \text{ Animals}}$$

$$\text{Chickens} = C_1 \quad C_2 \quad C_3 \quad C_4 \quad C_5 \quad C_6 = 6 \text{ Animals}$$

$$\text{Cows} = \frac{N}{4}$$

$$\text{chicken} = \frac{N}{2}$$

$$N = 10$$

$$\text{cows} = \frac{N}{4} = \frac{10}{4} = 2.5 = \boxed{2} \text{ cows}$$

still 2 ugs pending

$$\text{Remains} = N - (\text{cows} \times 4)$$

$$\text{chicken} = \text{Remains} / 2$$

$$\text{total} = \text{cows} + \text{chickens}$$

A. Watermelon

time limit per test: 1 second

memory limit per test: 64 megabytes

One hot summer day Pete and his friend Billy decided to buy a watermelon. They chose the biggest and the ripest one, in their opinion. After that the watermelon was weighed, and the scales showed w kilos. They rushed home, dying of thirst, and decided to divide the berry, however they faced a hard problem.

Pete and Billy are great fans of even numbers, that's why they want to divide the watermelon in such a way that each of the two parts weighs even number of kilos, at the same time it is not obligatory that the parts are equal. The boys are extremely tired and want to start their meal as soon as possible, that's why you should help them and find out, if they can divide the watermelon in the way they want. For sure, each of them should get a part of positive weight.

Input

The first (and the only) input line contains integer number w ($1 \leq w \leq 100$) — the weight of the watermelon bought by the boys.

Output

Print YES, if the boys can divide the watermelon into two parts, each of them weighing even number of kilos; and NO in the opposite case.

Examples

input	Copy
8	
output	Copy
YES	

Note

For example, the boys can divide the watermelon into two parts of 2 and 6 kilos respectively (another variant — two parts of 4 and 4 kilos).

