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# Bytelandian gold coins

Problem Code: **COINS**

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All submissions for this problem are available.

In Byteland they have a very strange monetary system.

Each Bytelandian gold coin has an integer number written on it. A coin  $n$  can be exchanged in a bank into three coins:  $n/2$ ,  $n/3$  and  $n/4$ . But these numbers are all rounded down (the banks have to make a profit).

You can also sell Bytelandian coins for American dollars. The exchange rate is 1:1. But you can not buy Bytelandian coins.

You have one gold coin. What is the maximum amount of American dollars you can get for it?

**My Submissions**

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**Successful Submissions**



## Input

The input will contain several test cases (not more than 10). Each testcase is a single line with a number  $n$ ,  $0 \leq n \leq 1\,000\,000\,000$ . It is the number written on your coin.

## Output

For each test case output a single line, containing the maximum amount of American dollars you can make.

## Example

**Input:**

12  
2

**Output:**

13  
2

You can change 12 into 6, 4 and 3, and then change these into  $\$6 + \$4 + \$3 = \$13$ . If you try changing the coin 2 into 3 smaller coins, you will get 1, 0 and 0, and later you can get no more than \$1 out of them. It is better just to change the 2 coin directly into \$2.

Author: [admin \(/users/admin\)](/users/admin)

Tags: [admin \(/tags/problems/admin\)](/tags/problems/admin)

Date Added: 1-12-2008

Time Limit: 9 secs

Source Limit: 50000 Bytes

Languages: ADA, ASM, BASH, BF, C, C99 strict, CAML, CLOJ, CLPS, CPP 4.3.2, CPP 6.3, CPP14, CS2, D, ERL, FORT, FS, GO, HASK, ICK, ICON, JAVA, JS, kotlin, LISP clisp, LISP sbcl, LUA, NEM, NICE, NODEJS, PAS fpc, PAS gpc, PERL, PERL6, PHP, PIKE, PRLG, PYPY, PYTH, PYTH 3.5, RUBY, rust, SCALA, SCM chicken, SCM guile, SCM qobi, ST, swift, TCL, TEXT, WSPC

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CodeChef was created as a platform to help programmers make it big in the world of algorithms, **computer programming** and **programming contests**. At CodeChef we work hard to revive the geek in you by hosting a **programming contest** at the start of the month and another smaller programming challenge in the middle of the month. We also aim to have training sessions and discussions related to **algorithms**, **binary search**, technicalities like **array size** and the likes. Apart from providing a platform for **programming competitions**, CodeChef also has various algorithm tutorials and forum discussions to help those who are new to the world of **computer programming**.

### **Practice Section (<https://www.codechef.com/problems/easy>) - A Place to hone your 'Computer Programming Skills'**

Try your hand at one of our many practice problems and submit your solution in a language of your choice. Our **programming contest** judge accepts solutions in over 35+ programming languages. Preparing for coding contests were never this much fun! Receive points, and move up through the CodeChef ranks. Use our practice section to better prepare yourself for the multiple **programming challenges** that take place through-out the month on CodeChef.

### **Compete (<https://www.codechef.com/problems/easy>) - Monthly Programming Contests and Cook-offs**

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### **Practice Problems**

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