

Gudi, a fun loving girl from the city of Dun, travels to Azkahar - a strange land beyond the mountains. She arrives at the gates of Castle Grey, owned by Puchi, the lord of Azkahar to claim the treasure that it guards. However, destiny has other plans for her as she has to move through floors, crossing obstacles on her way to reach the treasure.

The gates of the castle are closed. An integer N is engraved on the gates. A writing on the wall says

Tap the gates as many times as there are ${f unordered}$ pairs of distinct integers from 1 to Nwhose bit-wise XOR does not exceed N.

Help her find the number of the times she has to tap.

Input:

First line contains an integer T, T testcases follow.

Each testcase consists of an integer N.

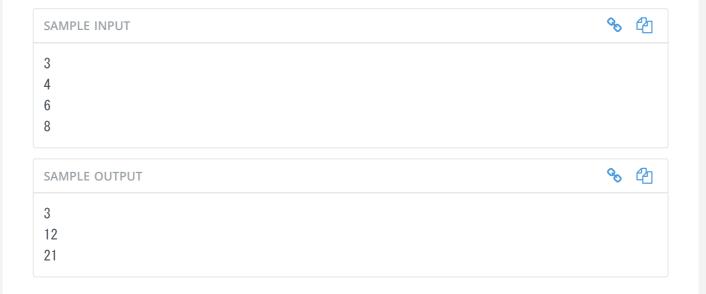
Output:

Print the answer to each testcase in a newline.

Constraints:

 $1 \le T \le 100$

$$2 \le N \le 2000$$



Explanation

```
For N=4, pairs are (1,2), (1,3) and (2,3)
 Time Limit:
                     2.0 sec(s) for each input file.
 Memory Limit:
                     256 MB
                                                                                                     12
                                                                                                       LIVE EVENTS
 Source Limit:
                     1024 KB
 Marking Scheme:
                     Marks are awarded when all the testcases pass.
 Allowed Languages: C, C++, Clojure, C#, D, Erlang, F#, Go, Groovy, Haskell, Java, Java 8, JavaScript(Rhino),
                     JavaScript(Node.js), Lisp, Lisp (SBCL), Lua, Objective-C, OCaml, Octave, Pascal, Perl, PHP, Python
                     Python 3, R(RScript), Racket, Ruby, Rust, Scala, Scala 2.11.8, Swift, Visual Basic
 CODE EDITOR
   Enter your code or Upload your code as file.
                                                         保存
                                                                 C (gcc 4.8.2)
    1 #include <stdio.h>
    2
    3
        int main()
    4 ₹ {
    5
             int t;int i,j;
    6
             int n;
    7
             int count;
    8
             scanf("%d",&t);
    9 *
             while(t--) {
   10
                  count=0;
                  scanf("%d",&n);
   11
   12
                  for(i=1;i<=n;i++)</pre>
   13
                       for(j=i+1; j<=n; j++)</pre>
                            if((i^j)<=n)
   14
   15
                                 count++;
                  printf("\n%d",count);
   16
   17
   18
   19
   20
   21
             return 0;
   22
        }
   23
                                                                                                   1:1
   ☑ カスタム入力を実行する
   ♀ オートコンプリートを表示するにはCtrl-spaceを押してください。
                                                                               コード テーブル を装備しています
Your Rating:
                                 Like 0 Share
                                                  Tweet
COMMENTS
```

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