Jam Ball

Jam Ball is like basketball in some ways, there is one ball and 2 hoops on opposing sides. But different in others, for instance players wear low gravity suits and are able to jump from almost anywhere on a court to dunk the ball. There are 4 ways to score points in Jam Ball. The first is a "Free Jam" which occurs after a team fouls another team, each "Free Jam" made is worth 2 points. The second way to score is called a "Jam" which is a dunk from fairly close to the hoop, this is worth 3 points. The third way to score is called a "Slam Jam" which is a dunk from about the three point line in today's basketball, a Slam Jam is worth 5 points. The fourth way to score is called a "Monster Slamajam" which is a dunk from half court or further, a Monster Slamajam is worth 7 points. One day in the locker room The Brofessor, Sizzle Juice, and The Arachnid are talking about Jam Ball (Note that all great Slam Jam stars have nicknames like this). "How many different ways do you think there are to get to 10 points in Jam Ball?" Asks The Brofessor to Sizzle Juice and The Arachnid. "I think there are 5 ways if you ignore the order of the jams:

1. 5 Free Jams
2. 2 Free Jams and 2 Jams
3. 1 Free Jam, 1 Jam, and 1 Slam Jam
4. 2 Slam Jams
5. 1 Monster Slamajam and 1 jam."

Says The Arachnid. "I wonder how many ways there are to earn 100 points. Or 1000?" Says Sizzle Juice.

Your task is to help out these Jam Ball Players figure out how many different ways there are to earn an exact amount of points in Jam Ball.

Input

There is a single positive integer T on the first line of input. Then follow T test cases each on new lines. A test case consists of 1 positive integer p on a new line, the number of points you need to find the number of ways to reach exactly.

Output

Output the correct answer for the given inputs running through the diagram provided above.

Constraints

1 <= T <= 1000

0 <= s <= 10000

Sample Input

3

10

20

1000

Sample Output

5
18
814044