Project Euler #108: Diophantine reciprocals I



Problem Statement

This problem is a programming version of Problem 108 from projecteuler.net

In the following equation x, y, and n are positive integers.

$$\frac{1}{x} + \frac{1}{y} = \frac{1}{n}$$

For n=4 there are exactly three distinct solutions:

$$\frac{1}{5} + \frac{1}{20} = \frac{1}{4}$$
$$\frac{1}{6} + \frac{1}{12} = \frac{1}{4}$$
$$\frac{1}{8} + \frac{1}{8} = \frac{1}{4}$$

Find the number of distinct solutions for a given value of N

Input Format

First line containts T i.e. number of testcases, each of the T lines contains an integer N

Constraints

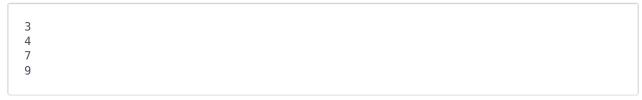
$$1 \le T \le 100$$

$$2 \le N \le 10^{18}$$

Output Format

Print the answer for each testcase on a new line.

Sample Input



Sample Output

