

## SPOJ Problem Set (classical)

### 1440. Use of Function Arctan

#### Problem code: ARCTAN

It's easy to know that  $\arctan(1/2)+\arctan(1/3)=\arctan(1)$ .The problem is,to some fixed number A,you have to write a program to calculate the minimum sum B+C.A,B and C are all positive integers and satisfy the equation below:

$$\arctan(1/A)=\arctan(1/B)+\arctan(1/C)$$

#### Input

The first line contains a integer number T.T lines follow,each contains a single integer A,  
 $1 \leq A \leq 60000$ .

#### Output

T lines,each contains a single integer which denotes to the minimum sum B+C.

#### Example

Sample input:

1  
1

Sample output:

5

**Some new test data has been added on Feb.15, 2009, 36 users lose their Accepted.**

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Added by: Blue Mary

Date: 2007-03-31

Time limit: 10s

Source limit:256B

Languages: All except: C99 strict

Resource: Chinese National Olympiad in Informatics 2001,Day 1; translated by Blue Mary