1. Robot Compare Size

Timelimit: 1000MS Memorylimit: 64M

Problem Description:

Two robots compare the size, output larger.

Input requirements:

Input two positive integers a and b (0 < = a, b < = 100), representing the size of the two robots respectively. The larger the integer, the larger the robot.

Output requirements:

Output the integer represented by the larger robot, that is, the maximum value of a and b.

Sample input:

3 6

Sample output:

6

2. Robot Penalty Kick Contest

Timelimit: 1000MS Memorylimit: 64M

Problem Description:

Seeing that the world cup is very popular, robots also want to show their talents. We want to fight robots through penalty kicks. Each time the robot shoots at the goal, the position is marked by an integer, and the defensive position of the human goalkeeper is also marked by an integer. If the shooting position is different from the defensive position, it is considered as the goal. If the robot is allowed to take n penalty shots, how many times can the robot shoot and score?

Input requirements:

In the first line, a positive integer n represents the number of times the robot has taken a penalty.

The second line is n integers separated by spaces, representing the position of the robot shooting at the goal in turn.

The third line is n integers separated by spaces, representing the positions that human goalkeepers defend in turn.

Note: all the above data are integers between [0,100].

Output requirements:

It is an integer, that is, the number of times the robot shots and scores.

Sample input:

```
10
1 2 3 4 5 6 7 8 9 0
1 2 3 4 5 1 2 3 4 5
```

Sample output:

```
5
```

3. Robot Fire Fighting Contest

Timelimit: 1000MS Memorylimit: 64M

Problem Description:

Recently, Robot Contest is in full swing. Now there is a robot fire fighting Contest. The robot fire fighting field is composed of four rooms in the shape of "田", and each room is numbered as 1, 2, 3 and 4 clockwise from the room in the lower left corner. Fire extinguishing difficulty of each room is defined by an integer. If the fire extinguishing ability of the robot is greater than or equal to the fire extinguishing difficulty of the room, it means that the robot can extinguish the fire in the room. The robot needs to start from room 1 and finally return to room 1 as the end of the Contest. The robot can walk one step to the next room in any direction of up, down, left and right.

For the given fire extinguishing difficulty of four rooms and the fire extinguishing ability of the robot, as well as the room number where the fire is located (only one room has fire, and the robot must walk to this room to have a chance to extinguish the fire), if the robot can not extinguish the fire, it will output 0; otherwise, it will output the minimum walking steps required for the robot to successfully return to room 1 after extinguishing the fire.

Input requirements:

The first line is 4 positive integers separated by spaces, representing the fire extinguishing difficulty of four rooms in turn.

The second line is a positive integer, which represents the fire fighting ability of the robot.

The third line is a positive integer representing the room number where the fire is located.

Output requirements:

Output the minimum walking steps required for the robot to return to room 1 after extinguishing the fire.

If the fire cannot be extinguished, the output is 0.

Sample input:

```
1 2 3 4
5
3
```

Sample output:

```
4
```

4. Robot Escort Team

Timelimit: 1000MS Memorylimit: 64M

Problem Description:

In view of the robot's super combat effectiveness, reconnaissance ability and protection ability, the army needs some robots to escort a group of people back to the camp. When robots and escorted people come to a Grand Canyon, they need to cross a single log bridge. They can only march in column. Due to the limited length of the single log bridge, the total number of marching robots and people on the bridge deck should not exceed M. To ensure the relative safety of people, there must be at least one robot between every two people in the column. For example, when M is 3, there are five marching modes: human robot human, human robot robot, robot human robot, robot robot human and robot robot robot.

If we give the number of marches that a single log bridge can bear at the same time, in order to achieve the fastest March, how many different marching schemes are there when the single log bridge is required to pass through the full capacity each time?

Input requirements:

There is only one line, which is a positive integer M (1 < = M < = 88), indicating the number of marches that the single log bridge can bear at the same time.

Output requirements:

There is only one line, which is a positive integer, that is, the number of different marching schemes for robot escorts to cross the single log bridge.

Sample input:

3

Sample output:
5

5. Robot Sends Red Packets

Timelimit: 3000MS Memorylimit: 64M

Problem Description:

When the new year comes, the patriarch will give red packets to everyone who comes to pay New Year's greetings. The patriarch has a pot of gold coins, which can be used to issue red packets. The grand patriarch needs to divide these gold coins into equal red packets, that is, the patriarch wants to give each person the same amount of gold coins. In order to let more people who come to visit the new year get red packets, the patriarch hopes to give as many people as possible red packets.

The patriarch asked you to help and issue red packets according to the above-mentioned rules, which would be difficult for you, so you asked the robot to help. Even the champion of go can be defeated by the robot, which is not a small business. Do you know how robot sends red packets?

Input requirements:

In the first line, enter a positive integer T ($1 \leqslant T \leqslant 29$), indicating that there is T group of test data.

Each group of test data input has two lines, the first line is a positive integer N ($0 < N < 66$), which represents the number of gold coins; the next line is N positive integers separated by spaces (each positive integer < 66), respectively representing the amount of each gold coin.

Output requirements:

The output of each group of test data takes up one line and is a positive integer, which represents the amount of gold in each red packet when it is divided into the most equal red packets.

Sample input:

```
2
6
5 2 1 5 1 4
4
1 2 3 4
```

Sample output:

```
6
5
```