

Toffee Shop

Problem Code: **TSHOP**



[Tweet](#)

(<https://twitter.com/share>)

Problem description

You are at the best toffee shop in the town. You see that there are different varieties of toffees in the shop.

Each type of toffee costs **P** rupees and contains **C** calories. You being a student have a fixed budget **B** rupees to spend on these toffees.

You want to **maximize the total calories** you gain by eating them.

Note : Any toffee can be eaten only once.

Your task is to write a program to output the maximum calories you gain with your budget (**B rupees**).

[All Submissions \(/DI17R021/status/TSHOP\)](#)

Successful Submissions



Input

First line contain T which represents the number of test cases
T test cases follow
Each test case has folowwing

One line containing two integers
N (number of different toffees) and **B** (your budget in rupees)
respectively.

Next line contains N space separated integers:
C1, C2, C3, CN (calories gained by eating ith toffee).
Next line contains N space separated integers:
P1, P2, P3, PN (cost of ith toffee in rupees).

Output

For each test case,
a single line containing one integer which is maximum calories you gain.

Constraints

0 < T <= 100
0 < N <= 16
0 < B <= 1000
0 < Ci <= 100000
0 < Pi <= 2000

Example

Input :

```
2
2 5
10 15
4 5
3 8
2 4 6
3 4 2
```

Output :

```
15
10
```

Explanation

In the first test case with budget 5 rupees we can eat second toffee which costs 5 and has calories 15 and hence answer is 15

In the second test case with budget 8 we can eat toffees with calories 6, 4 by costing 6 rupees and hence answer is 10

Author: [directi_campus \(/users/directi_campus/\)](/users/directi_campus/)

Tags: [directi_campus \(/tags/problems/directi_campus/\)](/tags/problems/directi_campus/)

Date Added: 4-07-2015

Time Limit: 1 secs

Source Limit: 50000 Bytes

Languages: C, CPP 4.3.2, CPP 6.3, CPP14, JAVA, PYTH, PYTH 3.5

Comments ▾

[CodeChef is a non-commercial competitive programming community](#)

[About CodeChef \(http://www.codechef.com/aboutus/\)](http://www.codechef.com/aboutus/) [About Directi \(http://www.directi.com/\)](http://www.directi.com/) [CEO's Corner \(http://www.codechef.com/ceoscorner/\)](http://www.codechef.com/ceoscorner/)
[C-Programming \(http://www.codechef.com/c-programming\)](http://www.codechef.com/c-programming) [Programming Languages \(http://www.codechef.com/Programming-Languages\)](http://www.codechef.com/Programming-Languages) [Contact Us \(http://www.codechef.com/contactus\)](http://www.codechef.com/contactus)

© 2009 Directi Group (<http://directi.com>). All Rights Reserved. CodeChef uses SPOJ © by Sphere Research Labs (<http://www.sphere-research.com>)
In order to report copyright violations of any kind, send in an email to copyright@codechef.com (<mailto:copyright@codechef.com>)

Directi (<http://directi.com>)
Intelligent People. Uncommon Ideas.
The time now is: 10:43:55 PM
Your IP: 123.201.210.10

<http://www.codechef.com>) - A Platform for Aspiring Programmers

CodeChef was created as a platform to help programmers make it big in the world of algorithms, **computer programming** and **programming contests**. At CodeChef we work hard to revive the geek in you by hosting a **programming contest** at the start of the month and another smaller programming challenge in the middle of the month. We also aim to have training sessions and discussions related to **algorithms**, **binary search**, technicalities like **array size** and the likes. Apart from providing a platform for **programming competitions**, CodeChef also has various algorithm tutorials and forum discussions to help those who are new to the world of **computer programming**.

<https://www.codechef.com/problems/easy>) - A Place to hone your 'Computer Programming Skills'

Try your hand at one of our many practice problems and submit your solution in a language of your choice. Our **programming contest** judge accepts solutions in over 35+ programming languages. Preparing for coding contests were never this much fun! Receive points, and move up through the CodeChef ranks. Use our practice section to better prepare yourself for the multiple **programming challenges** that take place through-out the month on CodeChef.

<https://www.codechef.com/problems/easy>) - Monthly Programming Contests and Cook-offs

Here is where you can show off your **computer programming skills**. Take part in our 10 day long monthly coding contest and the shorter format Cook-off **coding contest**. Put yourself up for recognition and win great prizes. Our **programming contests** have prizes worth up to INR 20,000 (for Indian Community), \$700 (for Global Community) and lots more CodeChef goodies up for grabs.

[Programming Tools](#)

[Online IDE \(https://www.codechef.com/ide\)](https://www.codechef.com/ide)
[Upcoming Coding Contests \(http://www.codechef.com/contests#FutureContests\)](http://www.codechef.com/contests#FutureContests)
[Contest Hosting \(http://www.codechef.com/hostyourcontest\)](http://www.codechef.com/hostyourcontest)
[Problem Setting \(http://www.codechef.com/problemsetting\)](http://www.codechef.com/problemsetting)
[CodeChef Tutorials \(http://www.codechef.com/wiki/tutorials\)](http://www.codechef.com/wiki/tutorials)
[CodeChef Wiki \(https://www.codechef.com/wiki\)](https://www.codechef.com/wiki)

[Practice Problems](#)

[Easy \(https://www.codechef.com/problems/easy\)](https://www.codechef.com/problems/easy)
[Medium \(https://www.codechef.com/problems/medium\)](https://www.codechef.com/problems/medium)
[Hard \(https://www.codechef.com/problems/Hard\)](https://www.codechef.com/problems/Hard)
[Challenge \(https://www.codechef.com/problems/challenge\)](https://www.codechef.com/problems/challenge)
[Peer \(https://www.codechef.com/problems/extcontest\)](https://www.codechef.com/problems/extcontest)
[School \(https://www.codechef.com/problems/school\)](https://www.codechef.com/problems/school)
[FAQ's \(https://www.codechef.com/wiki/faq\)](https://www.codechef.com/wiki/faq)

[Initiatives](#)

[Go for Gold \(http://www.codechef.com/qoforgold\)](http://www.codechef.com/qoforgold)
[CodeChef for Schools \(http://www.codechef.com/school\)](http://www.codechef.com/school)
[Campus Chapters \(http://www.codechef.com/campus_chapter/about\)](http://www.codechef.com/campus_chapter/about)
[Domain Registration in India \(http://www.bigrock.in/\)](http://www.bigrock.in/) and [Web Hosting \(http://www.bigrock.com/web-hosting/\)](http://www.bigrock.com/web-hosting/) powered by BigRock