Review problem - 4

Statement

Assess your performance by solving these problems on your own!

There are two problems in a contest.

- Problem A is worth 500 points at the start of the contest.
- Problem B is worth 1000 points at the start of the contest.

Once the contest starts, after each minute:

- Maximum points of Problem A reduce by 2 points .
- Maximum points of Problem B reduce by 4 points.

It is known that Chef requires X minutes to solve Problem A correctly and Y minutes to solve Problem B correctly.

Find the **maximum** number of points Chef can score if he optimally decides the order of attempting both the problems.

Input Format

- First line will contain T, number of test cases. Then the test cases follow.
- Each test case contains of a single line of input, two integers X and Y - the time required to solve problems A and B in minutes respectively.

Output Format

For each test case, output in a single line, the **maximum** number of points Chef can score if he optimally decides the order of attempting both the problems.

Constraints

- $1 \leq T \leq 1000$
- $1 \leq X, Y \leq 100$

Sample 1:

Input	Output
4 10 20 8 40 15 15 20 10	1360 1292 1380 1400

Explanation:

Test Case 1: If Chef attempts in the order $A \rightarrow B$ then he submits Problem A after 10 minutes and Problem B after 30 minutes. Thus, he gets $500 - 10 \cdot 2 = 480$ points for problem A and $1000 - 30 \cdot 4 = 880$ points for problem B. Thus, total $480 + 880 = 1360$ points for both the problems.

If Chef attempts in the order $B \rightarrow A$ then he submits Problem B after 20 minutes and Problem A after 30 minutes. Thus, he gets $1000 - 20 \cdot 4 = 920$ points for Problem B and $500 - 30 \cdot 2 = 440$ points for Problem A. Thus total $920 + 440 = 1360$ points for both the problems.

So, in both cases Chef gets 1360 points in total.

Test Case 2: If Chef attempts in the order $A \rightarrow B$ then he submits Problem A after 8 minutes and Problem B after 48 minutes. Thus, he gets $500 - 8 \cdot 2 = 484$ points for problem A and $1000 - 48 \cdot 4 = 808$ points for problem B. Thus, total $484 + 808 = 1292$ points for both the problems.

If Chef attempts in the order $B \rightarrow A$ then he submits Problem B after 40 minutes and Problem A after 48 minutes. Thus, he gets $1000 - 40 \cdot 4 = 840$ points for Problem B and $500 - 48 \cdot 2 = 404$ points for Problem A. Thus total $840 + 404 = 1244$ points for both the problems.

So, Chef will attempt in the order $A \rightarrow B$ and thus obtain 1292 points.

Test Case 3: If Chef attempts in the order $A \rightarrow B$ then he submits Problem A after 15 minutes and Problem B after 30 minutes. Thus, he gets $500 - 15 \cdot 2 = 470$ points for problem A and $1000 - 30 \cdot 4 = 880$ points for problem B. Thus, total $470 + 880 = 1350$ points for both the problems.

If Chef attempts in the order $B \rightarrow A$ then he submits Problem B after 15 minutes and Problem A after 30 minutes. Thus, he gets $1000 - 15 \cdot 4 = 940$ points for Problem B and $500 - 30 \cdot 2 = 440$ points for Problem A. Thus total $940 + 440 = 1380$ points for both the problems.

So, Chef will attempt in the order $B \rightarrow A$ and thus obtain 1380 points.

Test Case 4: If Chef attempts in the order $A \rightarrow B$ then he submits Problem A after 20 minutes and Problem B after 30 minutes. Thus, he gets $500 - 20 \cdot 2 = 460$ points for problem A and $1000 - 30 \cdot 4 = 880$ points for problem B. Thus, total $460 + 880 = 1340$ points for both the problems.

If Chef attempts in the order $B \rightarrow A$ then he submits Problem B after 10 minutes and Problem A after 30 minutes. Thus, he gets $1000 - 10 \cdot 4 = 960$ points for Problem B and $500 - 30 \cdot 2 = 440$ points for Problem A. Thus total $960 + 440 = 1400$ points for both the problems.

So, Chef will attempt in the order $B \rightarrow A$ and thus obtain 1400 points.