Problem C: Messi’s last world cup

Since the start of the world cup, many people started analysing Messi’s performance especially after they knew it was his last world cup, many think that it is lower than his level in 2018, but others think that it is too early to judge him. They all agreed that if he ended this season with the same average number of goals as the last time, then there is no need to worry.

Given four integers, N, M, X and Y representing his average number of goals per match in the last time, the number of goals he scored so far in the current season, the number of matches that were already played and the number of remaining matches respectively.

What is the minimum number of goals he needs to score in the remaining matches to have at least the same average number of goals as 2018?

Input:
The first line of the input is the number of test cases T. Each test case consists of four integers N, M, X, and Y, where $0 \le N,M,X,Y \le 1000$ and $X+Y>0$.

Output:

For each test case output a single line containing the minimum number of goals or −1 if Messi can't make it.

Example:

Input:

```
4
1 1 37 1
5 1 1 37
1 0 1 0
2 6 1 2
```

Output:

```
37
189
-1
0
```