1294 - Positive Negative Sign

Given two integers: **n** and **m** and **n** is divisible by **2m**, you have to write down the first **n** natural numbers in the following form. At first take first **m** integers and make their sign negative, then take next **m** integers and make their sign positive, the next **m** integers should have negative signs and continue this procedure until all the **n** integers have been assigned a sign. For example, let **n** be **12** and **m** be **3**. Then we have

If n = 4 and m = 1, then we have

$$-1 + 2 - 3 + 4$$

Now your task is to find the summation of the numbers considering their signs.

Input

Input starts with an integer T (≤ 10000), denoting the number of test cases.

Each case starts with a line containing two integers: n and m ($2 \le n \le 10^9$, $1 \le m$). And you can assume that n is divisible by 2*m.

Output

For each case, print the case number and the summation.

Sample Input	Output for Sample Input
	Case 1: 18
12 3	Case 2: 2
4 1	