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

-1 -2 -3 +4 +5 +6 **-7 -8 -9** +10 +11 +12

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 ≤ n ≤ 10^9, 1 ≤ 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
2 12 3 4 1	Case 1: 18 Case 2: 2