13 The Niffler wants it all
5 points

Introduction

Newt Scamander's curious monster, the Niffler, loves stealing things, and the more sparkly they are, the more he feels attracted to them. Newt has a mission, he has to save the city of New York, but the Niffler has escaped and he is stealing every jewel, coin or any sparkly thing he sees. But before Newt can fully focus on saving the city, he has to clean the mess and catch the Niffler back again, so you are going to help him to do so.

Newt is chasing the Niffler, and from time to time he finds the Niffler sneaking into a shop and he tries to catch him in the middle of the encounter. You are going to write a program that records the amount of sparkly things the Niffler steals, and the number of those sparkly objects Newt gets back in each encounter, so you can tell him whether he finally catches the Niffler or not. But be aware, the Niffler has a magical pocket where he stores everything he steals, so Newt has to get all objects he did not get in previous encounters.

Input

You will be given sequences of encounters between Newt and the Niffler. Each input line will be an encounter and will contain two values: The first one, the number of objects the Niffler has been able to steal in this particular encounter, and the second value, the number of objects Newt has been able to retrieve from the Niffler in the encounter.
Finally, a -1 (minus one) will indicate the end of the sequences.

•All values will always be integers greater or equal to zero.

•The total number of objects retrieved by Newt will always be less or equal to the number of objects stolen by the Niffler.

•There will always be at least one input sequence before -1.

Example of Input:
2 0
10 0
5 10
8 8
0 0
0 7
-1

Output

The output will be the result of the persecution for every input line, and a final line indicating whether Newt catches the Niffler.
Different messages have to be displayed for the three possible situations:

•When the Niffler increments its advantage over Newt, that is, he has stolen more objects vs those retrieved by Newt, 'The Niffler is escaping. +DIFFERENCE' has to be displayed.

•When Newt is getting closer, that is, he is retrieving more objects than the Niffler is stealing, then 'Newt is getting closer to the Niffler. -DIFFERENCE'.

•When the number of objects the Niffler steals remains the same as Newt has retrieved, then 'Newt is keeping the distance with the Niffler'.

In the first two cases, DIFFERENCE will be the amount of object the Niffler or Newt have advanced respect to the other.
Finally, if Newt catches the Niffler, that is, Newt has retrieved all objects stolen by the Niffler, the last line will be 'Newt catches the Niffler', otherwise, 'The Niffler has escaped'.

Example of Output:
```
The Niffler is escaping. +2
The Niffler is escaping. +10
Newt is getting closer to the Niffler. -5
Newt is keeping the distance with the Niffler
Newt is keeping the distance with the Niffler
Newt is getting closer to the Niffler. -7
Newt catches the Niffler
```