# Problem 3. Present Delivery

*Santa has limited time to drop at least some presents for each house. Help him with his mission!*

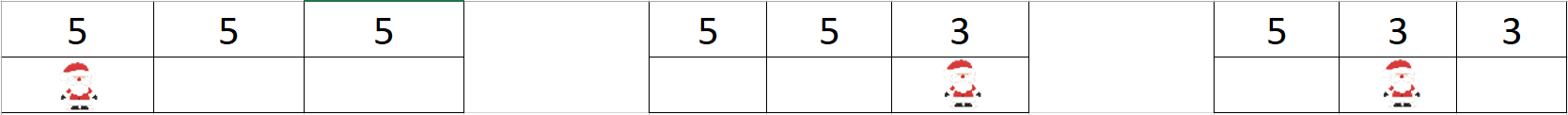
You will receive a **string** with **even integers** separated by **"@"** representing each house with its **number of members** and a series of **Jump** commands until you receive **"Merry Xmas!"**

Santa starts at the position of the **first** house and has to jump by a **given length.** The jump command will be in format: **"Jump {length}"**.

Each time he jumps from one house to another he drops **2 presents** for that house and **decreases** the needed presents for that house. If Santa jumps on a house which **doesn't need** more presents (presents = 0) you should instead print "**House {houseIndex} will have a Merry Christmas.**".

Keep in mind that Santa can have a **bigger jump length** than the **size of the field** and if he does jump **outside** of it he should **start** from the **beginning** again**.**

*For example we have a field of size 3 and each house has 5 members. Santa is at the start and jumps with length of 2. He will end up at index 2 and decrease the needed presents by 2 (5 – 2 = 3). Next he jumps again with length of 2 and ends up at index position 1 and again decreases the needed presents.*



## Input

* On the first line you will receive a **string** with **even integers** separated by **"@" –** houses and their number of members.
* On the next lines until "**Merry Xmas!**" you will receive jump commands in format: "**Jump {length}**".

## Output

At the end print Santa's **last position** and whether or **not** his mission was successful:

* "**Santa's last position was {lastPositionIndex}.**"
* If **all members** of **each house** have presents print:
  + "**Mission was successful.**"
* If **not** print the **count** of all houses that **won't** have a Merry Christmas:
  + **"Santa has failed {housesCount} houses."**

## Constraints

* The **field** can be of size **[1…20]**
* Each **house** will have an **even number** of **members** [**2** … **10**]
* Each **jump length** will be an integer [**1** … **20**]

## Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 10@10@10@2  Jump 1  Jump 2  Merry Xmas! | Santa's last position was 3.  Santa has failed 3 houses. |
| 2@4@2  Jump 2  Jump 2  Jump 8  Jump 3  Jump 1  Merry Xmas! | House 0 will have a Merry Christmas.  Santa's last position was 1.  Mission was successful. |