# Problem 1 - Journey to the Legendary Artifact



*In a mystical fantasy world, a brave character embarks on a journey to find a legendary artifact. Along the way, the character will face various challenges and must manage resources wisely to reach the artifact. The journey involves traversing different terrains, each with its own set of obstacles and resource requirements.*

Write a program that simulates the character's journey. The program should determine if the character **can find the legendary artifact** with the **given resources** or if more resources are needed. The program will run until the **"Journey ends here!"** command is given, until the **artifact pieces are collected**, or until the **character runs out of energy** (drops below zero or it is equal to zero).

**First**, you will receive the **initial energy** of the character. On the **next lines**, you will receive **different terrains** that the character must traverse:

* If the terrain is **"mountain"**, the character will need **10 energy points to pass it**.
* If the terrain is **"desert"**, the character will need **15 energy points to pass it**.
* If the terrain is **"forest"**, the character will **recharge with 7 bonus energy points**.

The **legendary artifact** consists of **3 pieces**. **One piece** is found **every** **3rd** (**third**) **mountain**. The character's **journey is successful** only if **all 3 pieces are collected**. If the hero **fails to find them**, it means that he/she has **lost his/her way** and the **journey is unsuccessful**.

## Input

The input will consist of:

* **Initial energy** - a **real number** representing the character's energy, in the range **[10.0…150.0]**
* **Terrains** - **strings** representing where the character will go next

The input will always be in the correct format.

## Output

The output should be **printed to the console**, and the **program will terminate** after any of the following conditions are met:

* If the character **reaches the legendary artifact**, print:

**"The character reached the legendary artifact with {remaining\_energy} energy left."**

* If the character's **energy drops below** **zero or it is equal to zero** at any point, they **fail to reach the artifact**. You need to print the following message:   
  **"The character is too exhausted to carry on with the journey."**
* If the character **never found all 3 pieces of the artifact**, print the message:   
  **"The character could not find all the pieces and needs {needed\_pieces} more to complete the legendary artifact."**

**NOTE: The initial energy should be formatted** to **the 2nd** decimal place.

## Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 130.0  mountain  desert  mountain  forest  mountain  desert  desert  mountain  mountain  desert  mountain  forest  mountain  mountain  forest  mountain  Journey ends here! | The character reached the legendary artifact with 1.00 energy left. |
| 40.0  mountain  desert  mountain  forest  mountain  mountain  Journey ends here! | The character is too exhausted to carry on with the journey. |
| 100.0  mountain  forest  mountain  forest  desert  mountain  desert  Journey ends here! | The character could not find all the pieces and needs 2 more to complete the legendary artifact. |

## JS Examples

The input will be provided as an array of strings.

|  |  |
| --- | --- |
| **Input** | **Output** |
| (["130.0",  "mountain",  "desert",  "mountain",  "forest",  "mountain",  "desert",  "desert",  "mountain",  "mountain",  "desert",  "mountain",  "forest",  "mountain",  "mountain",  "forest",  "mountain",  "Journey ends here!"]) | The character reached the legendary artifact with 1.00 energy left. |
| (["40.0",  "mountain",  "desert",  "mountain",  "forest",  "mountain",  "mountain",  "Journey ends here!"]) | The character is too exhausted to carry on with the journey. |
| (["100.0",  "mountain",  "forest",  "mountain",  "forest",  "desert",  "mountain",  "desert",  "Journey ends here!"]) | The character could not find all the pieces and needs 2 more to complete the legendary artifact. |