Montgomery Anaconda and the Sacred Chalice

Filename: `chalice`

By divine proclamation, Arturia was named ruler of all of Albion when she was given the holy saber, Excelsior, by the Woman in the Water. Unfortunately, the ignorant peasants, who consider themselves an autonomous autocracy, feel that her claim to rule is not proper for supreme executive power. Blasted peasants! In an attempt to prove herself as true ruler of the Brettons, the queen has undertaken a quest by the Big Guy in the Sky to search for the Sacred Chalice. Thus, Queen Arturia and her Sires of the Pentagonal Ottoman have begun their quest to find the Sacred Chalice, so that Arturia may claim her rightful place as Queen of the Brettons.

While on her quest, she comes across a village where a crowd of peasants are waving torches and pitchforks around a woman dressed in robes and a carrot on her nose, with loud chants of "She's a witch! Burn her!" being heard. Arturia's most intelligent sire, Bolivar, stepped forward to assess the situation. According to the villagers, this woman is a witch, and must, therefore, be burned. Unconvinced, Sire Bolivar suggested that there should be some test to ensure that she is a witch. But what kind of test should there be? Bolivar reasoned that if she is a witch, she is able to be burned. Because she can be burned, she must also be made of wood since it also burns. And if she is made of wood, she must also float. With that, the villagers began to ponder tossing her into the water to see if she'd float, only to realize that there is no large body of water nearby.

"Well", Bolivar then asked, "If she can float, she must be very light, at least as light as what?" The peasants stood dumbfounded. Then, the queen responded "A flock of geese!" to which Bolivar agreed whole-heartedly. Thus, if the woman truly is a witch, she must be as light as or lighter than a flock of geese. The crowd shouted in earnest and glee to test the woman of witchcraft. Unfortunately, their scales are not large enough to measure the woman and the flock of geese; thus, each must be weighed individually. Even worse, none of them are able to tell whether the woman or the flock of geese is heavier. Therefore, Queen Arturia has turned to you, Sire Not-Named-In-This-Problem, to use your programming skills to solve this dilemma, because here in 12th century Albion, no one else knows what in the world a computer is.

The Problem:

Given the weight in pounds of a person accused of witchcraft and the weight (also in pounds) of each of the geese in the trial's flock, determine whether or not the person is a witch, according to Sire Bolivar's reasoning. Since many other potential witches may be found, Queen Arturia would like you to make sure the program will work for multiple trials.

The Input:

The first line shall list a single positive integer, n, on a line by itself, stating the number of trials to be held. For each trial, the first line shall contain a single positive integer, w ($w \leq 500$), stating the weight of the accused. The next line shall contain a single integer, f ($1 \leq f \leq 10$), stating the number of geese in the flock. The next line shall contain f positive integers, each separated by a single space, telling the weight of each individual goose. No individual goose shall exceed 50 pounds.

The Output:

For each trial, output a line "`Trial #x: j`" where x is the current trial number (starting at 1), and j is either the phrase "`SHE'S A WITCH! BURN HER!`" if the accused is a witch according to her trial or "`She's not a witch. BURN HER ANYWAY!`" if she isn't. There should be one space after the colon.

Sample Input:

```
2
120
5
30 24 35 50 45
200
3
40 24 60
```

Sample Output:

```
Trial #1: SHE'S A WITCH! BURN HER!
Trial #2: She's not a witch. BURN HER ANYWAY!
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