

Series of Nightmares

A series of numbers can be generated with two parameters. These two parameters are power and term. The start of the series starts with power 1's. Each additional number in the series is the sum of the previous power numbers.

For example the sequence of numbers generated with a power=2 is: 1 1 2 3 5 8 13 21 34 55. The first two terms are 1 & 1. The third term is $1 + 1 = 2$. The fourth term is $1 + 2 = 3$. The fifth term is $2 + 3 = 5$. The sixth term is $3 + 5 = 8$. Etc. The tenth term is 55.

The sequence of numbers generated with a power of 3 is: 1 1 1 3 5 9 17 31 57 105. The first three terms are 1 & 1 & 1. The fourth term is the sum of the previous 3 terms: $1 + 1 + 1 = 3$. The fifth term is $1 + 1 + 3 = 5$.

The input file (input.txt) consists of lines of text. The first number is the power of the series. The second number is the term number that needs to be calculated. The range of numbers for the power parameter is 2 -36. The range of numbers for the term parameter is 1-36. If a parameter is encountered that is out of range the series function should return 0. Note that you will need to choose a variable type that accommodates up to 4 billion – 2 billion will not be sufficient.

The output file (output.txt) consists of lines of text. The first number is the power of the series. The second number is the term number that has been calculated. The third number is the answer.

The numbers are separated with spaces.

Example:

Sequence(2) = 1 1 2 3 5 8 13 21 34 55	Sequence(2,10)=55
Sequence(3) = 1 1 1 3 5 9 17 31 57 105	Sequence(3,10)=105
Sequence(4) = 1 1 1 1 4 7 13 25 49 94	Sequence(4,10) = 94

input.txt:

```
2 10$
3 10$
4 10$
4 37$
```

output.txt:

```
2 10 55$
3 10 105$
4 10 94$
4 37 0$
```