

MUNODI SEQUENCES

A Munodi sequence is a sequence of k integer numbers $c[0], c[1], \dots, c[k]$ where $c[n+1] = c[n]/2$ if $c[n]$ is even or $c[n+1] = 3*c[n]+1$ if $c[n]$ is odd. The sequence terminates when *one* appears (i.e., $c[k-1] = 1$).

Note: Whatever number is used as $c[0]$, the Munodi sequence is guaranteed to be finite.

Given the file `seq.dat` containing an unknown number of integer sequences, one per line, with number separated by spaces; write a Python program that check if the sequences are Munodi sequences and print the result on the screen.

If the sequence is a Munodi sequence, the program should also print its length. For example

`seq.dat`

```
12 6 3 10 5 16 8 4 2 1
12 6 3 10 4 16 8 4 2 1
7 22 11 34 17 52 26 13 40 20 10 5 16 8 4 2 1
1
```

Output:

```
Sequence 1 is a Munodi sequence (length 10)
Sequence 2 is NOT a Munodi sequence
Sequence 3 is a Munodi sequence (length 17)
Sequence 4 is a Munodi sequence (length 1)
```