## Chain of powers X75997_en

You have to program the function *short_power7_chains* below. Remember that 1 is a power of 7: $7^0 = 1$. The following auxiliar function may be helpful.

```
def is_power7(n):
    '''
    Requires a non negative integer n.
    Returns True when n is a power of 7
    Returns False when n is not a power of 7
    '''
    if n == 0:
        return False
    while n != 1:
        if n%7 != 0:
            return False
        n = n//7
    return True
```

- Write a function *short_power7_chains*(*f*, *k*) that given a list *f* of non negative integers and an integer *k* greater than zero returns `True` when all the chains formed by powers of seven have size at most *k*; otherwise the function returns `False`. A chain of powers of seven is a block of consecutive numbers in the list all of them being a power of seven.

### Scoring

The function counts 100 points.

### Sample session

```
>>> short_power7_chains([1, 7, 49, 7*7*7, 2], 3)
False
>>> short_power7_chains([1, 7, 49, 7*7*7, 2], 4)
True
>>> short_power7_chains([1, 7, 14, 7*7*7, 21, 28], 2)
True
>>> short_power7_chains([14, 7], 1)
True
>>> short_power7_chains([], 1)
True
```

### Problem information

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