Sequence
Input File: sequence.txt

As part of your job as a worker at a transmissions company, you receive several sequences. Your task is to determine if a sequence received is made of alternating prime numbers and perfect squares. Each valid sequence can start with either a prime or a perfect square, and has at least one of each.

Input:

An integer *x* stating the number of sequences
For each of the next x lines:
A sequence.

Output:

For each sequence, output "True" if the sequence consists of alternating prime numbers and perfect squares and has at least one of each, and "False" if not.

Example Input:

```
3
2424225
64322529
100816449
```

Example Output:

```
True
True
False
```