POTD55.1. Problem of the Day #55

Download and Extract

An initial setup of files is provided to you via a shell script: Download potd-q55

Using a terminal, extract the initial files by running the shell script you just downloaded (you will need to navigate to the directory where you saved the file):

```
sh potd-q55.sh
```

Your files for this problem will be in the `potd-q55` directory.

The Problem

(From POJ problem 2739)

Some positive integers can be represented by a sum of one or more consecutive prime numbers. How many such representations does a given positive integer have? For example, the integer 53 has two representations: `5 + 7 + 11 + 13 + 17` and `53`. The integer `41` has three representations `2+3+5+7+11+13`, `11+13+17`, and `41`. The integer `3` has only one representation, which is `3`. The integer `20` has no such representations. Note that summands must be consecutive prime numbers, so neither `7 + 13` nor `3 + 5 + 5 + 7` is a valid representation for the integer `20`.

Write a function `int *numSequences(std::vector<int> *primes, int num)` that takes a vector of primes that you learned to create for the Primes POTD, an integer of interest, and returns the number of representations for that given positive integer.

We have given you a solution to the Primes POTD to get you started.

```
2 has 1 sequence(s).
3 has 1 sequence(s).
17 has 2 sequences(s).
41 has 3 sequences(s).
```

Upload Solution

Drop files here or click to upload.

Only the files listed below will be accepted—others will be ignored.

Files

○ Primes.cpp
not uploaded

Save & Grade | Save only

POTD 55

Total points: 0/1

Score: 0%

Question

Value: 1

History:

Awarded points: 0/1

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