



## Problem of the Week

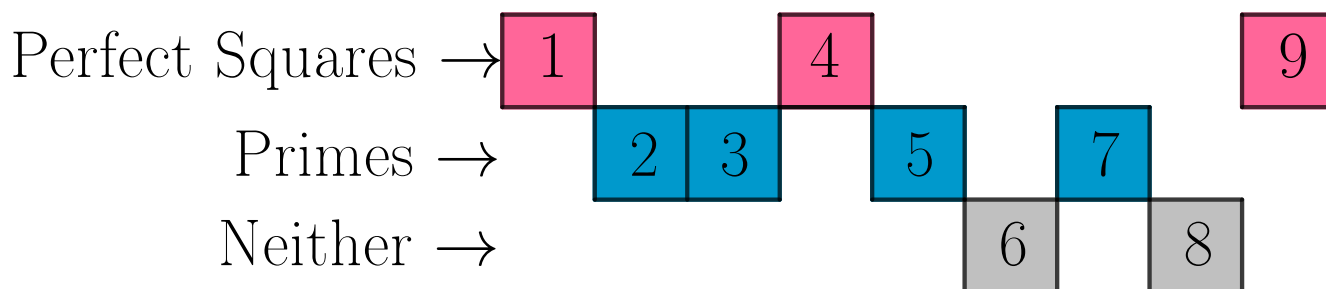
### Problem C

#### These Primes are Squares!

The number 7 has only two positive factors, 1 and itself. A positive integer greater than 1 whose only positive factors are 1 and itself is said to be *prime*.

A *perfect square* is an integer created by multiplying an integer by itself. The number 25 is a perfect square since it is  $5 \times 5$  or  $5^2$ .

Determine the smallest perfect square that has three different prime numbers as factors.



EXTENSION: Determine all perfect squares less than 10 000 that have three different prime numbers as factors.