## Problem of the Week Problem C Prime Picking

A natural number greater than 1 is said to be prime if its only factors are 1 and itself. For example, the number 7 is prime since its only factors are 1 and 7 .

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.



