Problem of the Week 4:

Due on Monday March 2nd at 5pm. Turn solutions in to the Problem of the Week box in Olin 380. Please write your solution on the back of this sheet. Any additional pages should be stapled to the problem sheet in the upper left hand corner. Remember to include your name to receive credit for your work. Good luck!

Consider the set $\{x \in \mathbb{Z} : 2 \leq x \leq 100\}$, or the integers between 2 and 100. How many numbers x satisfy all of the following conditions?

1. x is not prime

2. x is not divisible by a perfect square greater than 1

3. $2x$ is not divisible by a perfect square greater than 1.