Do the following exercises from the text:
Section 7.1: 6
Section 5.7: 1, 2, 3, 4, 6, 20

Additional Exercises.

1. Determine which of 2000, 2001, 2002, 2003, and 2004 can be written as a sum of two squares. For those that can, find a representation as a sum of two squares.

2. Write the integers $3185 = 5 \cdot 7^2 \cdot 13$; $39690 = 2 \cdot 34 \cdot 5 \cdot 7^2$; and $62920 = 2^3 \cdot 5 \cdot 11^2 \cdot 13$ as a sum of two squares.

3. Is it true that if m and n are sums of two squares and $m \mid n$, then $\frac{n}{m}$ is a sum of two squares? Prove it is true or give a counterexample.