This weightless assignment is due on Crowdmark by Wednesday, September 23, at 9:00pm EST. It does not count toward your course grade.

Exercise 1. Read Spivak Chapter 25, "Complex Numbers." Identify the pages in the chapter in which he discusses cubic equations. You may then skip these pages. Find all complex numbers z such that $z^2 = i$. Write your answer(s) z in the form $z = a + ib$.

Exercise 2. Read Spivak Chapter 2, "Numbers of Various Sorts." Select all the statements Spivak **proves** in this chapter:

(a) There is a real number x such that $x^2 = 2$, and this x is not rational.

(b) If a real number x is such that $x^2 = 2$, then x is not rational.

(c) There is a rational number x such that $x^2 = 2$.

(d) Every number is even or odd.

In one sentence, justify your selection.