



Problem of the Week

Problem C

Can't Get There From Here

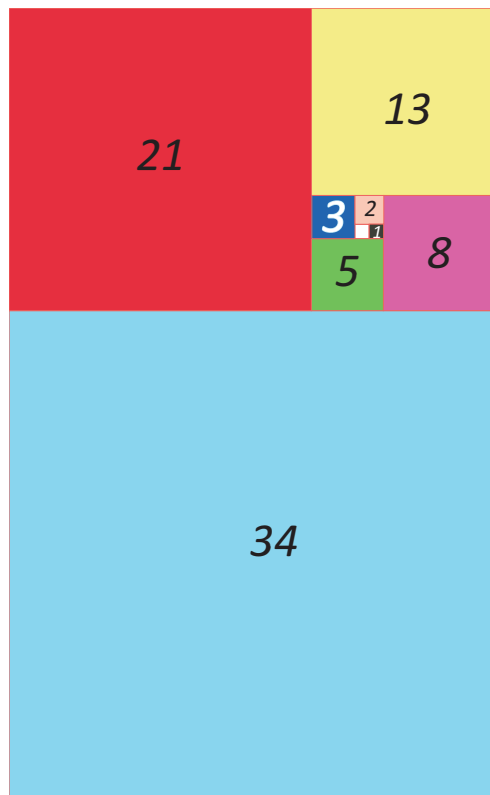
A list consists of the integers

1, 2, 3, 5, 8, 13, 21, and 34.

A second list of integers is created that contains all possible integers that can be formed by adding two different integers from the first list. The smallest integer in this list is $1 + 2 = 3$ and the largest integer in this list is $21 + 34 = 55$.

A third list of integers contains all of the integers from 3 to 55 that are not contained in the second list.

Determine the number of integers in the third list.



For your information:

The integers in the first list are numbers found in the *Fibonacci Sequence*. The rectangle shown above is often referred to as *The Fibonacci Rectangle*. The numbers inside the squares correspond to the side length of the square that contains the number. The two smallest squares (the white one and the black one) in the diagram each have side length 1. The rectangle spirals out from these two smallest squares. You may wish to investigate this sequence further.

