Problem of the Week

Problem E

No Bills

In Canada, we have a \$2 coin which is referred to as a Toonie, a \$1 coin which is referred to as a Loonie, and a 25¢ coin which is called a Quarter. Four quarters have a value of \$1.

Given an unlimited supply of Loonies, Toonies and Quarters, in how many different ways is it possible to make a total of exactly \$100?

Did you know?

There is a formula for calculating the sum of the first n positive integers.

That is,

$$1 + 2 + 3 + \ldots + n = \frac{n(n+1)}{2}.$$

For example, the sum of the first 10 positive integers is

$$1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 = \frac{10(10+1)}{2} = \frac{10(11)}{2} = 55.$$