





## Highly divisible triangular number

## Problem 12

The sequence of triangle numbers is generated by adding the natural numbers. So the  $7^{th}$  triangle number would be 1 + 2 + 3 + 4 + 5 + 6 + 7 = 28. The first ten terms would be:

Let us list the factors of the first seven triangle numbers:

1: 1 3: 1,3 6: 1,2,3,6 10: 1,2,5,10 15: 1,3,5,15 21: 1,3,7,21

**28**: 1,2,4,7,14,28

We can see that 28 is the first triangle number to have over five divisors.

What is the value of the first triangle number to have over five hundred divisors?