Abundant odd numbers

[](http://www.rosettacode.org/wiki/Category:Solutions_by_Programming_Task)

**Abundant odd numbers**  
You are encouraged to [solve this task](http://www.rosettacode.org/wiki/Rosetta_Code:Solve_a_Task) according to the task description, using any language you may know.

An [Abundant number](https://en.wikipedia.org/wiki/Abundant_number) is a number **n** for which the   *sum of divisors*   **σ(n) > 2n**,  
or,   equivalently,   the   *sum of proper divisors*   (or aliquot sum)       **s(n) > n**.

**E.G.**

**12**   is abundant, it has the proper divisors     **1,2,3,4 & 6**     which sum to   **16**   ( > **12** or **n**);  
       or alternately,   has the sigma sum of   **1,2,3,4,6 & 12**   which sum to   **28**   ( > **24** or **2n**).

Abundant numbers are common, though **even** abundant numbers seem to be much more common than **odd** abundant numbers.

To make things more interesting, this task is specifically about finding   *odd abundant numbers*.

**Task**

* Find and display here: at least the first 25 abundant odd numbers and either their proper divisor sum or sigma sum.
* Find and display here: the one thousandth abundant odd number and either its proper divisor sum or sigma sum.
* Find and display here: the first abundant odd number greater than one billion (109) and either its proper divisor sum or sigma sum.

**References**

* [OEIS:A005231: Odd abundant numbers (odd numbers n whose sum of divisors exceeds 2n)](https://oeis.org/A005231)
* American Journal of Mathematics, Vol. 35, No. 4 (Oct., 1913), pp. 413-422 - Finiteness of the Odd Perfect and Primitive Abundant Numbers with n Distinct Prime Factors (LE Dickson)