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THE ON-LINE ENCYCLOPEDIA OF INTEGER SEQUENCES[®]

founded in 1964 by N. J. A. Sloane

(Greetings from [The On-Line Encyclopedia of Integer Sequences!](#))

A062693 Squarefree n such that the elliptic curve $n*y^2 = x^3 - x$ arising in ⁴ the "congruent number" problem has rank 3.

1254, 2605, 2774, 3502, 4199, 4669, 4895, 6286, 6671, 7230, 7766, 8005, 9015, 9430, 9654, 10199, 10549, 11005, 11029, 12166, 12270, 12534, 12935, 13317, 14965, 15655, 16151, 16206, 16887, 17958, 18221, 19046, 19726, 20005, 20366

([list](#); [graph](#); [refs](#); [listen](#); [history](#); [text](#); [internal format](#))

OFFSET 0,1

COMMENTS Conjectural, as detailed in the pages from which it is extracted (see the first few links at the web site mentioned for details), but the conjecture is supported by much numerical and theoretical evidence.

LINKS [Table of \$n\$, \$a\(n\)\$ for \$n=0..34\$.](#)

A. Dujella, A. S. Janfeda, S. Salami, [A Search for High Rank Congruent Number Elliptic Curves](#), JIS 12 (2009) 09.5.8.

N. D. Elkies, [Algorithmic \(a.k.a. Computational\) Number Theory: Tables, Links, etc.](#)

Fidel Ronquillo Nemenzo, [All congruent numbers less than 40000](#), Proc. Japan Acad. Ser. A Math. Sci., Volume 74, Number 1 (1998), 29-31. See Table IV p. 31.

PROG (PARI) $r(n)=\text{ellanalyticrank}(\text{ellinit}([0, 0, 0, -n^2, 0]))$
[1]

for($n=1, 1e4, \text{if}(r(n)==3, \text{print1}(n, " "))$) \ \ [Charles R. Greathouse IV](#), Sep 01 2011

CROSSREFS Cf. [A062694](#), [A062695](#).

Sequence in context: [A252157](#) [A252150](#) [A023068](#) * [A067203](#)
[A230544](#) [A280928](#)

Adjacent sequences: [A062690](#) [A062691](#) [A062692](#) * [A062694](#)
[A062695](#) [A062696](#)

KEYWORD nonn

AUTHOR [Noam D. Elkies](#), Jul 04 2001

STATUS approved

[The OEIS Community](#)

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Last modified August 20 12:51 EDT 2025. Contains 386856 sequences.

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