Odd abundant numbers of the form $2 \cdot k \cdot P-(345+30 \cdot (k-1))$ where P are Poulet numbers

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Abstract. In this paper I make the following three conjectures: (I) All numbers of the form 2*k*645 – (345 + 30*(k – 1)), where k natural, are odd abundant numbers; the sequence of these numbers is 945, 2205, 3465, 4725, 5985, 7245, 8505, 9765...(II) All numbers of the form 2*k*1905 – (345 + 30*(k – 1)), where k natural, are odd abundant numbers; the sequence of these numbers is 3465, 7245, 11025, 14805, 18585, 22365, 26145, 29925...(III) There exist an infinity of Poulet numbers P such that all the numbers 2*k*P – (345 + 30*(k – 1)), where k natural, are odd abundant numbers.

Conjecture I:

All numbers of the form 2*k*645 – (345 + 30*(k – 1)), where k natural, are odd abundant numbers.

Note: see the sequence A005231 in OEIS for odd abundant numbers.

The sequence of these odd abundant numbers:

: 945 = 2*1*645 – (345 + 30*0);
: 2205 = 2*2*645 – (345 + 30*1);
: 3465 = 2*3*645 – (345 + 30*2);
: 4725 = 2*4*645 – (345 + 30*3);
: 5985 = 2*5*645 – (345 + 30*4);
: 7245 = 2*6*645 – (345 + 30*5);
: 8505 = 2*7*645 – (345 + 30*6);
: 9765 = 2*8*645 – (345 + 30*7);
(...)

Conjecture II:

All numbers of the form 2*k*1905 – (345 + 30*(k – 1)), where k natural, are odd abundant numbers.

The sequence of these odd abundant numbers:

: 3465 = 2*1*1905 – (345 + 30*0);
: 7245 = 2*2*1905 – (345 + 30*1);
: 11025 = 2*3*1905 – (345 + 30*2);
: 14805 = 2*4*1905 – (345 + 30*3);

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:    18585 = 2*5*1905 – (345 + 30*4);
:    22365 = 2*6*1905 – (345 + 30*5);
:    26145 = 2*7*1905 – (345 + 30*6);
:    29925 = 2*8*1905 – (345 + 30*7);
     (...)
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Conjecture III:

There exist an infinity of Poulet numbers P such that all the numbers 2*k*P – (345 + 30*(k – 1)), where k natural, are odd abundant numbers.