Project Euler #45: Triangular, pentagonal, and hexagonal

Problem Statement

This problem is a programming version of Problem 45 from projecteuler.net

Triangle, pentagonal, and hexagonal numbers are generated by the following formulae:

$$\begin{array}{lll} \text{Triangle} & T_n = n(n+1)/2 & 1,3,6,10,15,\cdots \\ \text{Pentagonal} & P_n = n(3n-1)/2 & 1,5,12,22,35,\cdots \\ \text{Hexagonal} & H_n = n(2n-1) & 1,6,15,28,45,\cdots \end{array}$$

It can be verified that $T_{285} = P_{165} = H_{143} = 40755$

For this challene you are given N, a, b, where $a < b$ and $a, b \in \{3, 5, 6\}$
where 3 represents triangular numbers, 5 represents pentagonal numbers and 6 is hexagonal. It can be observed that all hexagonal numbers are triangular numbers so we'll handle only 2 kinds of queries as
$N\ 3\ 5$, find all numbers below N which are Triangular number as well as Pentagonal
$N\ 5\ 6$, find all numbers below N which are Pentagonal number as well as Hexagonal

Input Format
Input contains three integers $N\ a\ b$

Output Format
Print the answer corresponding to the test case. Print numbers in ascending oder.

Constraints
$2 \leq N \leq 2 \times 10^{14}$
$a, b \in \{3, 5, 6\}$
$a < b$

Sample Input #00

```
10000 3 5
```

Sample Output #00

```
1
210
```

Sample Input #01

```
100000 5 6
```

Sample Output #01

```
1
40755
```