## CMPUT 274 - Tangible Computing
## Morning Problem: N-Sum

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### Description

An **N-Sum** is the sum of all numbers from $1 - n$, it can be represented by the following formula, $\sum_{k=1}^{n} k = \dfrac{n(n+1)}{2}$.

One interesting property of N-Sums is that you are able to sum to any number less than or equal to $\dfrac{n(n+1)}{2}$ using only numbers between $1 - n$.

Your goal in this problem is to output $k$, the minimum amount of numbers it will take to sum up to $m$ using only numbers between $1 - n$, each at most once. You are also to output the $k$ numbers you chose to sum up to $n$.

### Input

Input will consist of a single line containing two space separated integers, $n$ and $m$ with $(1 \leq n \leq 100,000)$ and $(1 \leq m \leq \frac{n(n+1)}{2})$.

### Output

The first line of output will contain an integer $k$, the number of distinct digits you used to sum up to $m$.

The second line will contain the $k$ space separated integers **from least to greatest**, that sum up to $m$. If multiple answers are possible, the answer containing the larger numbers will be considered correct. (see sample 2 explanation)

### Sample Input 1

```
10 55
```

### Sample Output 1

```
10
1 2 3 4 5 6 7 8 9 10
```

### Explanation:

The N-Sum from $1 - 10$ is equal to 55, so all 10 digits from $1 - 10$ are printed.

### Sample Input 2

```
5 10
```

**Sample Output 2**

```
3
1 4 5
```

**Explanation**:

There are two possible answers to these values containing 3 digits each. 2, 3, 5 and 1, 4, 5. The latter contains a larger number, namely 4, so it is therefore the correct answer.