# Cheap Vacation

| | |
|---|---|
| Input file: | **standard input** |
| Output file: | **standard output** |
| Time limit: | 1 second |
| Memory limit: | 256 megabytes |

After weeks of searching for affordable activities for her upcoming vacation on the deal hunting website AussieBargains, Mia has finally found a bargain! She has found a special coupon code which allows her to book activities for her trip for free.

Mia is unfortunately very indecisive and takes a long time to decide on exactly which activity she should book. As such, she is only able to book one trip per day using coupons she has already claimed. Alternatively, each day she can instead choose to collect additional coupons. The deal is so great that each time she claims coupons, she will get one more coupon compared to the last day she claimed coupons, starting at one coupon on her first day.

Mia decides she will spend exactly $n$ days organising her trip before she takes her vacation. Specifically, on each day she will choose between either:

- using a coupon she claimed previously to book an activity, or
  - This will reduce her total number of unused coupons by exactly one and increase her total number of booked activities by exactly one.
  - This action cannot be taken if it would result in her total coupon count going below zero.
- using her code to claim additional unused coupons from the website.
  - The first use of this action earns one coupon, the second use earns two, and so on.

Note that if Mia has no coupons, she can only choose the second option.

One possible sequence of actions is:

- Claim one coupon;
- Claim two coupons;
- Book one activity;
- Book one activity;
- Claim three coupons;
- Book one activity;
- Claim four coupons;
- Book one activity;
- Claim five coupons.

Here, Mia will spend 9 days organising her trip in total and have 11 unused coupons at the end, whilst having used 4 of them.

You know $n$, the total number of days that Mia used the website, and $k$, the number of unused coupons. You need to find the total number of activities that Mia has booked, namely the total number of days Mia made the first choice.

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## Input

The first line of input will contain two integers $n$ and $k$ ($1 \leq n \leq 10^9; 0 \leq k \leq 10^{18}$) $n$ and $k$ ($1 \leq n \leq 10^9; 0 \leq k \leq 10^{18}$) – the number of days and the number of unused coupons.

It is guaranteed that for the given $n$ and $k$, there is always a valid solution.

## Output

Print a single integer – the number of activities which Mia has booked. Please note that there is only a single distinct solution for all possible inputs.

## Examples

| standard input | standard output |
|---|---|
| 1 1 | 0 |
| 9 11 | 4 |
| 879502715 389349841884537 | 851597494 |

## Note

In the first example, Mia has only organised her vacation for one day. The first move always has to be claiming one coupon, so therefore Mia has booked no activities.

In the second example, a possible sequence of actions each day could be:

- Claim one coupon;

- Claim two coupons;

- Book one activity;

- Book one activity;

- Claim three coupons;

- Book one activity;

- Claim four coupons;

- Book one activity;

- Claim five coupons;

This way, Mia will visit the site for exactly $n = 9$ days and she will have $1+2-1-1+3-1+4-1+5 = 11$ unused coupons.

The answer is therefore 4 since Mia booked four activities.