Good Old Football

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	512 megabytes

FIFA World Cup 2018 held in Russia gave a huge impact on football popularity in Moscow. Fascinated by the great matches, lots of foreign football fans and overall impression of non-stop holiday in the city, many young people decided to drop computer games and went to streets in order to play football and to become the next generation of first class football players.

Unfortunately, there are too many players and too little places suitable for playing football at the streets. There is a company of n friends that want to play as a team in a match tomorrow evening on a local street field. Street matches do not usually follow the football rules as strictly as the official matches. For example, they may lack the referee, the field may be significantly smaller or the game may last for a different time rather than regular 45 minutes per half. This time, the team should have m people and the game is going to last for t minutes.

The number m happened to be smaller than n, meaning that not everyone will be able to spend all the time at the field. In order to give everybody a chance to play for a long enough time, friends came up with a following replacement algorithm: after each 5 minutes of a game, player of a team that has spend the most time at the field among current players leaves the field and currently waiting player who spent the least time at the field enters the game instead. If there are several choices for leaving and entering players, each of them is chosen arbitrarily among people having the most or least playing time respectively. Consider the replacement itself to be instant (i.e. taking 0 minutes to perform).

Game has not started yet but the friends are curious whether their algorithm is indeed fair. Calculate the least and the most time that is going to be spent by any of the friends at the field.

Input

The only line of input contains three integers ($2 \le n \le 10^{12}$, $1 \le m < n$, $1 \le t \le 10^{12}$), the number of friends, the number of players at field and the duration of a game in minutes.

Output

Print two integers a and b, the least among the times spend by all friends at the field in minutes and the most.

Examples

standard input	standard output
6 4 13	3 13
12 11 60	55 55

Note

Consider the first sample case. Suppose we have players numbered from 1 to 6 and players from 1 to 4 are initially at the field. There will be two replacements; they may go as follows. First, by the end of minute 5 the player 1 leaves the field (as he already spent 5 minutes in game as well as the players 2, 3 and 4) and becomes replaced with a player 5 (as he spent 0 minutes at the field as well as the player 6). Then, by the end of minute 10 the player 2 leaves the field (as he already spent 10 minutes at the field as well as the players 3 and 4, and the player 5 spent only 5 minutes at the field) and becomes replaced with a player 6 (as he spent 0 minutes at the field, while the player 1 who is currently out of the field already spent 5 minutes in game).

Thus, by the end of the game player 1 will spend 5 minutes in the game, player 2 will spend 10 minutes in the game, players 3 and 4 will play for all 13 minutes, player 5 will spend 8 minutes in the game and player 6 will spend only 3 minutes in the game.

In the second sample case each time the replacement happens, the only remaining player enters the game and each player will spend exactly 5 minutes out of the game, thus all players will spend exactly 55 minutes in game.