

# Iron Warrior

Input file: *standard input*  
Output file: *standard output*  
Time limit: 1 second  
Memory limit: 1024 mebibytes

You are playing a card game. Initially, your draw pile is empty, and you have 4 cards in your hand: Rage, Shrug It Off, Pommel Strike, and Body Slam. Each time you play a card from your hand, you put it into the draw pile after calculating its effects. The effects of each card are as follows:

Rage: Skill card; costs 0 energy. After you play an attack card, you gain 5 block (the effect is stackable, meaning if you have played Rage twice, you will gain 10 block after each attack card).

Shrug It Off: Skill card; costs 1 energy. Gain 11 block and draw one card.

Pommel Strike: Attack card; costs 1 energy. Deal 10 damage and draw two cards.

Body Slam: Attack card; costs 0 energy. Deal damage equal to the amount of block (damage is dealt first, then the block gained from Rage is calculated).

Each time you draw cards, if the number of cards drawn is greater than or equal to the size of the draw pile, you draw all cards into your hand; otherwise, you randomly draw the specified number of cards from the draw pile into your hand. The question is: if you initially have  $n$  energy, what is the maximum damage you can guarantee to deal (regardless of how the cards are drawn)?

## Input

The first line of input contains a single integer  $n$  ( $1 \leq n \leq 10^{18}$ ).

## Output

Output a line containing a single integer: the maximum damage that can be dealt.

## Examples

<i>standard input</i>	<i>standard output</i>
1	20
3	72
4	105

## Note

In the first test case, you can play the following cards in order:

1. Play Rage. Draw pile: Rage; Hand: Shrug It Off, Pommel Strike, Body Slam.
2. Play Body Slam, dealing 0 damage, and gaining 5 block (because of Rage). Draw pile: Rage, Body Slam; Hand: Shrug It Off, Pommel Strike.
3. Play Pommel Strike, costing 1 energy, drawing Rage and Body Slam from the draw pile, dealing 10 damage, and gaining 5 block (because of Rage). Draw pile: Pommel Strike. Hand: Rage, Shrug It Off, Body Slam.
4. Play Body Slam, dealing 10 damage, and gaining 5 block (because of Rage). Draw pile: Pommel Strike, Body Slam. Hand: Rage, Shrug It Off.

In the second test case, you can play: Rage, Body Slam, Pommel Strike, Shrug It Off, Body Slam, Pommel Strike, Body Slam.

In the third test case, you can play: Rage, Shrug It Off, Body Slam, Pommel Strike, Shrug It Off, Body Slam, Pommel Strike, Body Slam.