
Card game

P54504_en

Concurs On-line OIE 2007 (2007)

You are playing a card game with a friend. For this game only the suit of the cards matters. The four suits are clubs, diamonds, hearts and spades, with the following values:

Suit	Symbol	Value
Clubs	♣	1
Diamonds	♦	5
Hearts	♥	8
Spades	♠	14

Your friend selects a number n , and you must show cards whose total value equals n , by using the minimum possible number of cards. Assume that you have an unlimited number of cards of each suit.

Input

Input consists of several cases, each one with a natural number n between 0 and 500000. Input ends with a -1 .

Output

For every n , print the corresponding result.

Sample input

16
31
91
-1

Sample output

2
4
8

Problem information

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