

# LKP '18 Contest 2 P2 - Secret Signal

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**Time limit:** 3.0s    **Memory limit:** 64M

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The Alliance, which was at war with Collea, uses a highly convoluted method to encrypt their messages which involves signaling a long series of positive integers. Despite their best attempts, Collea was unable to effectively decrypt their messages. However, they have found out that a sequence of these signals might be an encrypted message if and only if the sum of the integers signalled is a multiple of  $K$ . The Alliance had just signalled  $N$  integers. Help the Collean Armed Forces find how many continuous intervals of these signals might contain an encrypted message.

## Constraints

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$$1 \leq N \leq 200\,000$$

$$1 \leq K \leq 50\,000$$

$$1 \leq a_i \leq 1\,000\,000$$

## Input Specification

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The first line contains two positive integers,  $N$  and  $K$ .

The next line contains  $N$  positive integers, the numbers  $a_1, a_2, \dots, a_N$ .

## Output Specification

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Print one integer, the number of intervals of the signals whose elements sum to a multiple of  $K$ .

## Sample Input

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5 4
60 2 7 1 2
```

## Sample Output

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```
4
```