

1. BIJELE

Mirko has found an old chessboard and a set of pieces in his attic. Unfortunately, the set contains only white pieces, and apparently an incorrect number of them. A set of pieces **should** contain:

- One king
- One queen
- Two rooks
- Two bishops
- Two knights
- Eight pawns

Mirko would like to know how many pieces of each type he should **add or remove** to make a valid set.

Input

The input consists of 6 integers on a single line, each between 0 and 10 (inclusive). The numbers are, in order, the numbers of kings, queens, rooks, bishops, knights and pawns in the set Mirko found.

Output

Output should consist of 6 integers on a single line; the number of pieces of each type Mirko should add or remove. If a number is positive, Mirko needs to add that many pieces. If a number is negative, Mirko needs to remove pieces.

Sample test data

input

0 1 2 2 2 7

output

1 0 0 0 0 1

input

2 1 2 1 2 1

output

-1 0 0 1 0 7