

Problem PIZZAROLL: Pizza Roll

The pizza roll industry is booming and your ICPC-hosts want to earn their fair share of the world market by creating a delicious side business. The pizza rolls have three main ingredients: dough (D), salami (S), and a secret mighty topping (MT). For starters, the founders selected six different types of pizza rolls with the following required amounts of ingredients:

1. Vegetarian: 100 D , 0 S , 150 MT
2. Meaty: 150 D , 100 S , 50 MT
3. Super meaty: 100 D , 200 S , 50 MT
4. Fake light: 50 D , 100 S , 150 MT
5. Mighty: 50 D , 0 S , 200 MT
6. Heart-attack-inducing-fat: 200 D , 200 S , 200 MT

Due to the experiences of numerous programming contests (aka market research), the market price for the different types are well-known and the demand is considered to be unbounded. Hence, they simply have to come up with a plan to turn their available resources into as much profit as possible. As they can not leave their computer-scientist-selves behind, they hired you to find a proper algorithm that takes the available ingredients and the achievable prices for each type as input and computes the maximum achievable total income under the given constraints.

Input

There is only one test case given in 2 lines. The first line of a test contains three numbers representing the total available resources in the following order: dough, salami, and mighty topping (each value $\leq 30\,000$). The second line contains six numbers specifying the price for each pizza roll type in the order introduced above: vegetarian, meaty, super meaty, fake light, mighty, heart-attack-inducing-fat (each price $\leq 10\,000$). All values, resources and prices, are integer.

Output

One line per test case containing the maximum achievable total income based on the available ingredients and the given prices in the test case.

Sample Input 1

```
550 500 300
1 10 100 1000 5000 10000
```

Sample Output 1

```
10110
```

Sample Input 2

```
30000 30000 30000
1 1 1 1 1 1
```

Sample Output 2

```
300
```

Sample Input 3

```
150 100 300
200 50 100 300 1 1000
```

Sample Output 3

```
500
```