Unloaded Die

Consider a six-sided die, with sides labeled 1 through 6. We say the die is *fair* if each of its sides is equally likely to be face up after a roll. We say the die is *loaded* if it isn't fair. For example, if the side marked 6 is twice as likely to come up as than any other side, we are dealing with a loaded die.

For any die, define the *expected result* of rolling the die to be equal to the average of the values of the sides, weighted by the probability of those sides coming up. For example, all six sides of a fair die are equally likely to come up, and thus the expected result of rolling it is $(1+2+3+4+5+6)/6 = 3.5$.

You are given a loaded die, and you would like to *unload* it to make it more closely resemble a fair die. To do so, you can erase the number on one of the sides, and replace it with a new number which does not need to be an integer or even positive. You want to do so in such a way that

- The expected result of rolling the die is 3.5, just like a fair die.
- The difference between the old label and the new label on the side you change is as small as possible.

1 Input

The input consists of a single line containing six space-separated nonnegative real numbers $v_1 \dots v_6$, where v_i represents the probability that side i (currently labeled by the number i) is rolled.

It is guaranteed that the given numbers will sum to 1.

2 Output

Print, on a single line, the absolute value of the difference between the new label and old label, rounded and displayed to exactly three decimal places.

3 Sample Input and Output

0.16666 0.16667 0.16667 0.16666 0.16667 0.16667	0.000
0.2 0.2 0.1 0.2 0.2 0.1	1.000