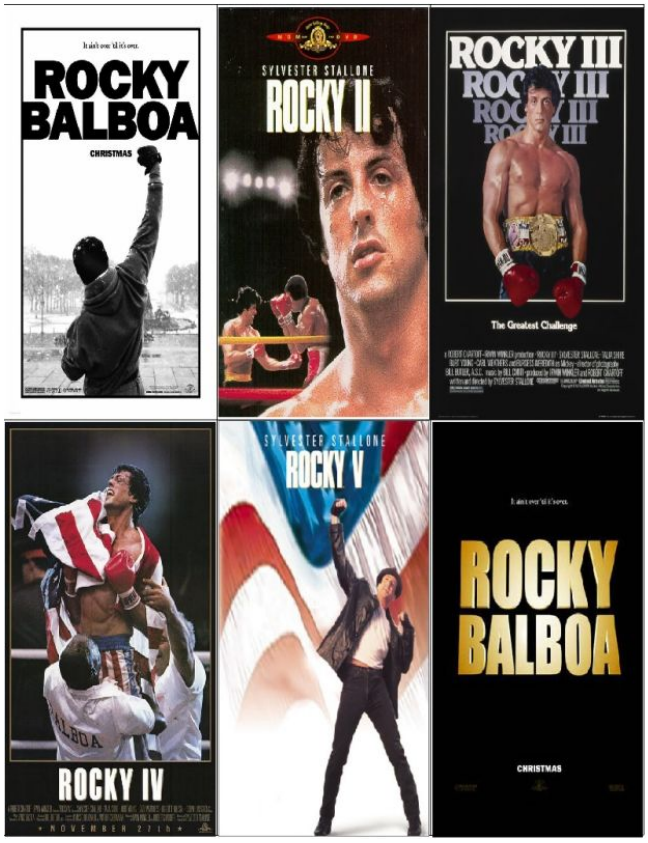

Goal

Your cinematographic tastes are very average, so much so that when you ask your **K** best friends what rating they gave to a movie, you generally rated it as the average of their ratings.

A new episode, Rocky VI, arrives at the cinema. Is it really better than the previous ones? To protect your mental health, you decide to predict your appreciation of Rocky VI before going (or not) to see it.

Your **N** friends have all seen the first 5 Rocky movies (otherwise they would not be your friends) and the new episode. But for you, your **K** best friends (**K≤N**) are the ones who really matter, even if you have not decided who they are. To choose these **K** mates from **N**, you will take those who have tastes the most similar to yours on the first 5 Rocky movies.

The distance between your tastes and those of a particular friend is calculated as follows:

- for each of the first 5 Rocky, we look at the difference between your grade and the note given by the friend in question (more precisely, the absolute value of the difference);
- then we take the sum of the gaps for the 5 films.

The **K** best friends are then those whose tastes are closer to you. To save yourself a terrible dilemma you are guaranteed that the choice is unique, so there can not be two K^{ths} closest friends equals. You will calculate the average of their grades for the new Rocky rounded down to an integer: this will give you a prediction of the note that you may give to this film if you watch it.

Data

Input

Row *1*: five integers between *0* and *10* inclusive separated by spaces, the grades you gave to the first five Rocky films.
Row *2*: an integer **N** between *1* and *20* inclusive, representing your number of friends.
Row *3*: an integer **K** between *1* and **N** included, representing your number of best friends.
Rows *4* to **N** + *3*: six integers between *0* and *10* separated by spaces, each row corresponds to one of your friends. The first five integers are the grades of the first Rocky films, the sixth is the grade of the new episode.

Output

An integer, indicating the average of the grades that your **K** best friends gave to the new episode, rounded down.

Example

If you have the following input :
10 7 3 4 3
4
2
9 4 7 2 1 1
2 1 3 2 10 5
9 10 10 9 10 10
8 9 2 4 3 4

Your two best friends are the first (distance 12 = (10-9) + (7-4) + (7-3) + (4-2) + (3-1)) and the last (distance 5) from the list, they gave the notes 1 and 4 to reboot, you will give the average (1 + 4) / 2 rounded to the lower integer, so the answer is 2.

You can download sample input and output data files to work locally by clicking on the link at the bottom of the French version of the question

Téléchargez des fichiers d'exemple ainsi qu'un modèle de code pour travailler localement.