# Day 0: Weighted Mean

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10 Days of Statistics

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**Objective**

In the previous challenge, we calculated a mean. In this challenge, we practice calculating a weighted mean. Check out the Tutorial tab for learning materials and an instructional video!

**Task**

Given an array, $X$, of $N$ integers and an array, $W$, representing the respective weights of $X$'s elements, calculate and print the weighted mean of $X$'s elements. Your answer should be rounded to a scale of $1$ decimal place (i.e., $12.3$ format).

**Input Format**

The first line contains an integer, $N$, denoting the number of elements in arrays $X$ and $W$.
The second line contains $N$ space-separated integers describing the respective elements of array $X$.
The third line contains $N$ space-separated integers describing the respective elements of array $W$.

**Constraints**

- $5 \leq N \leq 50$
- $0 < x_i \leq 100$, where $x_i$ is the $i^{th}$ element of array $X$.
- $0 < w_i \leq 100$, where $w_i$ is the $i^{th}$ element of array $W$.

**Output Format**

Print the weighted mean on a new line. Your answer should be rounded to a scale of $1$ decimal place (i.e., $12.3$ format).

**Sample Input**

```
5
10 40 30 50 20
1 2 3 4 5
```

**Sample Output**

```
32.0
```

**Explanation**

We use the following formula to calculate the weighted mean:

$$m_w = \frac{\sum_{i=0}^{N-1}(x_i \times w_i)}{\sum_{i=0}^{N-1} w_i} \Rightarrow m_w = \frac{10 \times 1 + 40 \times 2 + 30 \times 3 + 50 \times 4 + 20 \times 5}{1 + 2 + 3 + 4 + 5} = \frac{480}{15} = 32.0$$

And then print our result to a scale of $1$ decimal place ($32.0$) on a new line.

**Current Buffer** (saved locally, editable)

Java 8

```
import java.io.*;
import java.util.*;

public class Solution {

    public static void main(String[] args) {
        Scanner
    }
}
```

Line: 1 Col: 1

Upload Code as File | Test against custom input | Run Code | Submit Code