Solution 5-1

This is an example solution from the forthcoming book Networks and Complexity.
Find more exercises at https://github.com/NC-Book/NCB

Ex 5.1: Averages revision [1]

Compute the averages of the following sequences of numbers: a) $3, 7, 5$; b) $1, 3, 6, 1, 2, 5$; c) a sequence containing 13 times the number 3 and 7 times the number 17.

Solution

We find the solution by adding up all the numbers and dividing by the number of numbers that we added up. This means for part (a)

$$\frac{3 + 7 + 5}{3} = \frac{15}{3} = 5 \tag{1}$$

For part (b)

$$\frac{1 + 3 + 6 + 1 + 2 + 5}{6} = \frac{18}{6} = 3 \tag{2}$$

For part (c) we can save us some work by using multiplication to add up the numbers rather than adding them up term by term

$$\frac{13 \cdot 3 + 7 \cdot 17}{13 + 7} = \frac{39 + 119}{20} = \frac{158}{20} = 7 + \frac{18}{20} = 7.9 \tag{3}$$