

Correction d'exercices :

12

$$\bar{x} = \frac{7+10+11+12}{4} = \frac{40}{4} = 10$$

X list
7
10
11
12

$$\bar{x} = \frac{2+5+6+7+10}{5} = \frac{30}{5} = 6$$

X list
2
5
6
7
10

$$V = \frac{1}{4} \left[(7-10)^2 + (10-10)^2 + (11-10)^2 + (12-10)^2 \right]$$

$$V = \frac{14}{4} = 3,5 \quad \sigma = \sqrt{V} = \sqrt{3,5} \approx 1,87$$

$$V = \frac{1}{5} \left[(2-6)^2 + (5-6)^2 + (6-6)^2 + (7-6)^2 + (10-6)^2 \right]$$

$$V = \frac{34}{5} = 6,8 \quad \sigma = \sqrt{V} \approx 2,61$$

Les exercices 13-14-15 peuvent être traités à la calculatrice.

13

$$\bar{x} = \frac{7+10+12+8+12}{5} = \frac{49}{5} = 9,8$$

$$V = \frac{1}{5} \left[(7-9,8)^2 + (10-9,8)^2 + (12-9,8)^2 + (8-9,8)^2 + (12-9,8)^2 \right]$$

$$V = \frac{17,6}{5} = 3,52 \quad \sigma = 1,88$$

1Var X = list 1

1Var freq = 1

List 1

7
10
12
8
12

14

$$\bar{x} = \frac{7,94+8,09+8,08+7,88+7,93+8,20}{6} = \frac{48,12}{6} = 8,02$$

$$V = \frac{1}{6} \left[(7,94-8,02)^2 + (8,09-8,02)^2 + (8,08-8,02)^2 + (7,88-8,02)^2 + (7,93-8,02)^2 + (8,20-8,02)^2 \right] \approx 0,0125$$

$$\sigma = 0,112$$

15

on regroupe les valeurs dans un tableau d'effectifs

$$\bar{x} = \frac{1 \times 6 + 2 \times 3 + 3 \times 6 + 4 \times 5 + 5 \times 3 + 6 \times 7}{30} = \frac{107}{30} \approx 3,57$$

x_i	1	2	3	4	5	6	Total 30
n_i	6	3	6	5	3	7	

list 1
list 2

$$V = \frac{1}{30} \left[6(1-3,57)^2 + 3(2-3,57)^2 + 6(3-3,57)^2 + 5(4-3,57)^2 + 3(5-3,57)^2 + 7(6-3,57)^2 \right]$$

1Var X list = list 1
1Var freq = list 2

$$\sigma = 1,80$$