

$$2. P(E_1) = 1 - P(E_2) = 1 - 0,467 = 0,532$$

$$P(E_2) = \frac{7}{10} \cdot \frac{6}{9} = 0,467$$

$$P(E_3) = \frac{3}{10} \cdot \frac{7}{9} + \frac{7}{10} \cdot \frac{3}{9} = 0,467$$

$$P(E_4) = \frac{7}{10} \cdot \frac{3}{9} / \frac{7}{10} = \frac{3}{9} = 0,33$$

$$P(E_5) = \frac{3}{10} \cdot \frac{2}{9} / \frac{3}{10} = 0,3$$

22.

2 \ 1	1	2	3	4	5	6
1	0	-1	-2	-3	-4	-5
2	1	0	-1	-2	-3	-4
3	2	1	0	-1	-2	-3
4	3	2	1	0	-1	-2
5	4	3	2	1	0	-1
6	5	4	3	2	1	0

$$P(E_1) = \frac{6}{36}$$

$$P(E_2) = \frac{4}{36}$$

$$P(E_3) = \frac{30}{36}$$

$$P(E_4) = \frac{16}{36}$$

$$P(E_5) = \frac{18}{36}$$

1.

X	0	5	10	15	20
P(X)	$\frac{9}{36}$	$\frac{12}{36}$	$\frac{10}{36}$	$\frac{4}{36}$	$\frac{1}{36}$
F(X)	0	$\frac{9}{36}$	$\frac{21}{36}$	$\frac{31}{36}$	$\frac{35}{36}$
P(X) * X	0	$\frac{45}{36}$	$\frac{100}{36}$	$\frac{60}{36}$	$\frac{20}{36}$
P(X) * X <sup>2</sup>	0	$\frac{300}{36}$	$\frac{1000}{36}$	$\frac{900}{36}$	$\frac{400}{36}$

$$E(X) = 6,67$$

$$\sqrt{x} = 5,27$$

i	x		c	a	n	n.i	n.j	f	f.i	f.j	h	z	n.z	n.z <sup>2</sup>	n.x	n.x <sup>2</sup>
1	50	70	60	20	12	12	170	0.071	0.071	1.000	3	-4.5	-54	243	720	43200
2	70	80	75	10	24	36	158	0.141	0.212	0.929	12	-1.5	-36	54	1800	135000
3	80	85	82.5	5	37	73	134	0.218	0.429	0.788	37	0	0	0	3052.5	251831.3
4	85	90	87.5	5	48	121	97	0.282	0.712	0.571	48	1	48	48	4200	367500
5	90	95	92.5	5	26	147	49	0.153	0.865	0.288	26	2	52	104	2405	222462.5
6	95	105	100	10	14	161	23	0.082	0.947	0.135	7	3.5	49	171.5	1400	140000
7	105	120	112.5	15	9	170	9	0.053	1.000	0.053	3	6	54	324	1012.5	113906.3
15	120	120	120	0	0	0	0	0.000	0.000	0.000	#DIV/0!	7.5	0	0	0	0
					170								113	944.5	14590	1273900

a0 = 5  
z0 = 82.5

moyenne	x	z	x
variance	85.82	0.665	85.82
écart-type	127.85	5.114	127.85
x-σ	11.31	2.261	11.31
x+σ	74.52		
	97.13		

Me = x0 + (N/2 - y0) \* (x1 - x0) / (y1 - y0)    N/2 = 85  
X0 = 85  
X1 = 90  
y0 = 73  
y1 = 121

Me = 86.25

Q1 = x0 + (N/4 - y0) \* (x1 - x0) / (y1 - y0)    N/4 = 42.5  
X0 = 80  
X1 = 85  
y0 = 36  
y1 = 73

Q1 = 80.88

Q3 = x0 + (3N/4 - y0) \* (x1 - x0) / (y1 - y0)    3N/4 = 127.5  
X0 = 90  
X1 = 95  
y0 = 121  
y1 = 147

Q3 = 91.25

Ecart interquartile = 10.37

D1 = x0 + (N/4 - y0) \* (x1 - x0) / (y1 - y0)    N/10 = 17  
X0 = 70  
X1 = 80  
y0 = 12  
y1 = 36

D1 = 72.08

D9 = x0 + (3N/4 - y0) \* (x1 - x0) / (y1 - y0)    9N/10 = 153  
X0 = 95  
X1 = 105  
y0 = 147  
y1 = 161

D9 = 99.29

Rapport interdécile = 1.38

Percentiles

P = x0 + (3N/4 - y0) \* (x1 - x0) / (y1 - y0)    50.00 = 85  
X0 = 85  
X1 = 90  
y0 = 73  
y1 = 121

P = 86.25

Inf = y0 + (x - x0) \* (y1 - y0) / (x1 - x0)    x = 74.52  
X0 = 70  
X1 = 80  
Y0 = 12  
Y1 = 36

Inf = 22.84

Sup = y0 + (x - x0) \* (y1 - y0) / (x1 - x0)    x = 97.13  
X0 = 95  
X1 = 105  
Y0 = 147  
Y1 = 161

Sup = 149.98

Effectif dans l'intervalle = 127.14  
Pourcentage = 74.79%

