lista 3

1) $\frac{7,5 + 8 + 3,5 + 6 + 2,5 + 5,5 + 4}{7} = \frac{37}{7} = \pm 5,3$

2) a) 2, 2, 3, 4, 5, 5, 5, 7
Média = 4,125
Mediana = 4,5
Moda = 5

b) 3, 4, 4, 5, 9, 12, 12
Média = 7
Mediana = 5
Moda = 4, 12

c) 4, 5, 6, 6, 6, 7, 8, 8, 8, 9, 10, 10, 11
Média = 7,5384
Mediana = 8
Moda = 6, 8

d) 2, 5, 8, 9, 10, 12
Média = 7,666
Mediana = 8,9
Moda = Amodal

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3) 420, 440, 440, 470, 480, 500, 840
Mediana = 470
Moda = 440

4) Média = 23,75
Mediana = 21,22
Moda = 20

5) a) Media = 4,5714 b) Media = 184,6
Mediana = 4,8 Mediana = 181,184
Moda = 4,8 Moda = amodal

c) Media = 170,62
Mediana = 169,3
Moda = amodal

6) $\frac{13 + 13,20 + 13,50}{3}$

$\frac{39,7}{3} = 13,23...$

7)

	i	Xi	fi	Xi fi
	1	2	1	2
	2	3	4	12
	3	4	3	12
	4	5	2	10
total			10	36

$\frac{\sum Xi\,fi}{\sum fi} = \frac{36}{10} = 3,6$

8)

i	Xi	fi	Xi fi
1	17	3	51
2	18	18	324
3	19	17	323
4	20	8	160
5	21	4	84
Σ	~	50	942

$\frac{942}{50} = 18,84$

9)

i	aluguel	fi	Xi	Xi · fi
1	0 ⊢ 200	30	100	3.000
2	200 ⊢ 400	52	300	15.600
3	400 ⊢ 600	28	500	14.000
4	600 ⊢ 800	7	700	4.900
5	800 ⊢ 1000	3	900	2.700
	Total	120		40.200

$\frac{40.200}{120} = 335$

10)

i	Aumento	fi	Xi	Xi · fi
1	0 ⊢ 1	1	0,5	0,5
2	1 ⊢ 2	5	1,5	7,5
3	2 ⊢ 3	35	2,5	80
4	3 ⊢ 4	37	3,5	129,5
5	4 ⊢ 5	28	4,5	126
		106		343,5

$\frac{343,5}{106} = 3,2405$

4

Parte 2

$\bar{x} = \frac{22}{11} = 2$

1)

i	Xi	fi	Xi fi	$(Xi - \bar{x})^2 \cdot fi$
1	1	5	5	5
2	2	2	4	0
3	3	3	9	3
4	4	1	4	4
		11	22	12

$s^2 = \frac{12}{10} = 1,2$

$s = \sqrt{1,2} = 1,0954$

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2)

i	x_i	f_i	$x_i f_i$	$(x_i - \bar{x})^2 \cdot f_i$
1	0	30	0	6,075
2	1	5	5	1,5125
3	2	3	6	7,2075
4	3	1	3	6,5025
5	4	1	4	12,6025
		40	18	33,9

$\bar{x} = \frac{18}{40} = 0,45$

$s^2 = \frac{33,9}{39} = 0,8692$

$s = \sqrt{0,8692} = 0,9323...$

3)

i	Notas	f_i	x_i	$x_i \cdot f_i$	$(x_i - \bar{x})^2 \cdot f_i$
1	0 ⊢ 2	5	1	5	32,768
2	2 ⊢ 4	7	3	21	2,1952
3	4 ⊢ 6	10	5	15	20,736
4	6 ⊢ 8	3	7	21	35,5008
5	8 ⊢ 10	5	9	45	147,968
		30		107	239,168

$\bar{x} = \frac{107}{30} \simeq 3,56$

$s = \sqrt{8,2471} = 2,8717$

$s^2 = \frac{239,168}{29} = 8,2471$

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4)

i	Estaturas	fi	Xi	Xifi	$(X_i - \bar{X})^2 \cdot f_i$
1	150 ⊢ 160	2	155	310	1.235,0415
2	160 ⊢ 170	15	165	2.475	3.307,8375
3	170 ⊢ 180	18	175	3.150	423,405
4	180 ⊢ 190	18	185	3.330	477,405
5	190 ⊢ 200	16	195	3.120	3672,36
6	200 ⊢ 210	1	205	205	632,5225
		70		12.590	9.748,575

$\bar{X} = \frac{12.590}{70} = 179,85$ $\quad s = \sqrt{141,283} = 11,88$

$s^2 = \frac{9.748,575}{69} = 141,283$

5) $\frac{14,2}{188} \cdot 100 = 7,55\%$ $\quad \frac{8,6}{136} \cdot 100 = 6,32\%$

6) 1: $\frac{60}{160} \cdot 100 = 37,5\%$ $\quad 3: \frac{70}{175} \cdot 100 = 40\%$

2: $\frac{75}{170} \cdot 100 = 44,1\%$ $\quad 4: \frac{75}{165} \cdot 100 = 45,45\%$

3ª parte

1) a) 10
b) 21
c) 13
d) 15 (Mediana)
e) 17

2) a) As mulheres
b) aprox. 160 min
c) Às horas

3) a) Mistura 1
b) Mistura 3
c) aprox. 25

4) 5,4 - 7,8 - 8,8 - 9,2 - 9,4 - 9,9 - 11,8 - 12,6 - 12,7 - 13,4 - 14,3 - 15,4 - 15,6 - 15,9 - 16,8 - 16,9 - 17,0 - 18,4 - 19,2 - 19,5 - 20,5 - 20,8 - 22,1 - 24,1 - 28,6

Menor valor: 5,4
1º Quartil: 11,8
2º Quartil: 15,6
3º Quartil: 19,2
Maior Valor: 28,6

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