

RESOLUÇÃO do 4º TESTE

10^º43

20/10/2011

1.1) $\bar{x} = \frac{15+15+16+16+16+17+18+19}{8} = 16,5$

1.2) $V = \frac{2 \times (15-16,5)^2 + 3 \times (16-16,5)^2 + (17-16,5)^2 + (18-16,5)^2 + (19-16,5)^2}{8}$

$V = 1,75 \quad \sigma = \sqrt{1,75} \approx 1,32$

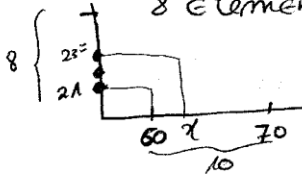
2.1) $\bar{x} = \frac{2 \times 35 + 3 \times 45 + 15 \times 55 + 8 \times 65 + 2 \times 75}{30} = 56,67$

2.2) $V = \frac{2 \times (35-56,67)^2 + 3 \times (45-56,67)^2 + 15 \times (55-56,67)^2 + 8 \times (65-56,67)^2 + 2 \times (75-56,67)^2}{30}$

$V = 87,22 \quad \sigma = 9,34$

2.3) $\tilde{x} \in [50,60[\quad Q_1 \in [50,60[\quad Q_3 \in [60,70[$

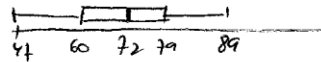
2.4) Q_3 é o 23º elemento. A classe $[60,70[$ tem 8 elementos: 21º, 22º, 23º, ... 28º



$\frac{10 \rightarrow 8}{x \rightarrow 3} \quad x = \frac{3 \times 10}{8} = 3,75$

$Q_3 \approx 63,75$

3) Máx: 89 min: 47 $Q_1 = 60 \quad Q_3 = 79 \quad \tilde{x} = 72$



3.2) $89 - 47 = 42 \quad 3.3) 79 - 60 = 19$

4.1) 16 $4.2) 7 \quad 4.3) \frac{4}{16} \times 100\% = 25\%$

4.4) $\frac{0 \times 4 + 5 \times 1 + 2 \times 3 + 3 \times 2 + 4 \times 2}{16} = 1,5625$

5)

| CABELO/OLHOS | Castanhos | Azuis | Verdes | Total |
|--------------|-----------|-------|--------|-------|
| Castanho | 205 | 20 | 75 | 300 |
| Louro | 30 | 50 | 70 | 150 |
| Ruivo | 10 | 10 | 30 | 50 |
| TOTAL | 245 | 80 | 175 | 500 |

6.1) $x = 0,938$

6.2) $y = 0,922x - 0,402$

6.3.1) $0,922 \times 13 - 0,402 = 11,58$

6.3.2) $17 = 0,922x - 0,402 \Leftrightarrow x = \frac{17 + 0,402}{0,922}$

$x = 18,87$

7) $15 + 56 = 71$ $12 \times 12 = 144$

$144 - 71 = 73$

8.1) $3 \times 5 + 5 \times 5,5 + 3 \times 2,5 = 50$

R: 50%

8.2) $1 \times 5 + 5 \times 5,5 + 10 \times 2,5 + 10 \times 0,5 = 62,5$

R: 62,5%