Exercício de Revisão

$R = 80,6 - 22,3 = 58,3$

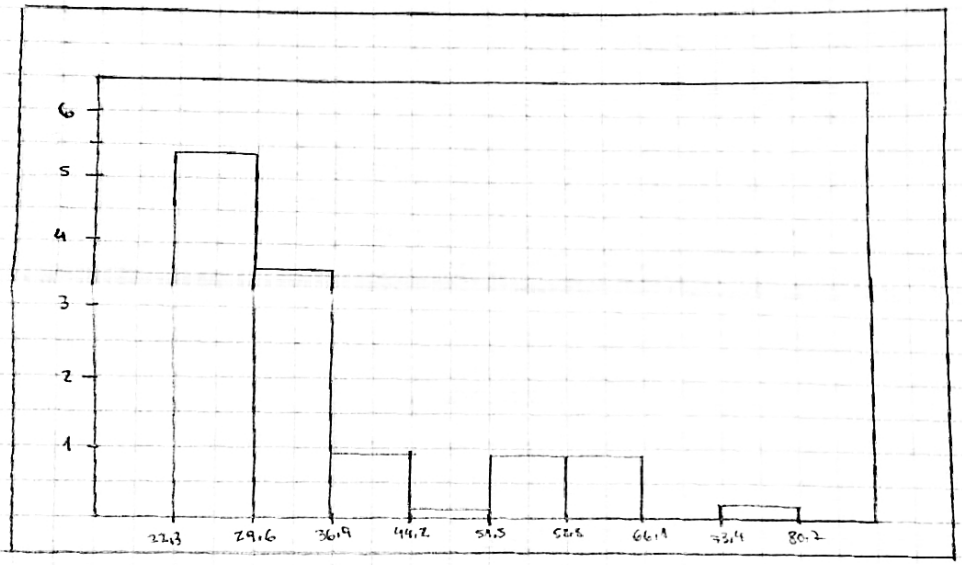
$K = 1 + 3,3 \log(120) = 7,8613 \rightarrow 8$

$h = 58,3 / 8 = 7,28 \rightarrow 7,3$

1)

Classes	Teores de Ácido oleico	Observações	fac	fad	fri	Xi	Xifi
1	22,3 ⊢ 29,6	54	54	120	0,4500	25,95	1401,3
2	29,6 ⊢ 36,9	36	90	66	0,300	33,25	1197
3	36,9 ⊢ 44,2	9	99	30	0,0750	40,55	364,95
4	44,2 ⊢ 51,5	1	100	21	0,0084	47,85	47,85
5	51,5 ⊢ 58,8	9	109	20	0,0750	55,15	496,35
6	58,8 ⊢ 66,1	9	118	11	0,0750	62,45	562,05
7	66,1 ⊢ 73,4	0	118	2	0	69,75	0
8	73,4 ⊢ 80,7	2	120	2	0,017	77,05	154,1
	total	120			1,0004		

2)



3) $\bar{x} = \frac{\sum_{i=1}^{k} x_i f_i}{n} = \frac{4196,6}{120} = \boxed{34,97}$

4) $\tilde{x} = LI_{\tilde{x}} + \left[\frac{n/2 - f_{ant}}{f_{me}}\right] \rightarrow$ $n/2 = 60 \rightarrow$ classe 2

$LI = 22,6$; $f_{ca} = 54$; $f_{me} = 36$

$\tilde{x} = 22,6 + \left[\frac{60 - 54}{36}\right] = 22,776 \approx \boxed{22,8}$

5) $M_o = LI_{mod} + \left[\frac{\Delta_1}{\Delta_1 + \Delta_2}\right] h$ classe 1 → Obs = 54

$LI_{mod} = 22,3$

$\Delta_1 = 54 - 0$

$\Delta_2 = 54 - 36$

$h = 7,3$

$M_o = 22,3 + \left[\frac{54}{54+18}\right](7,3) = 27,775 \approx \boxed{27,8}$

6)

7) DESVIO PADRÃO

$$s = \sqrt{\frac{\sum x_i^2 f_{ri}}{n-1} - \frac{n\bar{x}^2}{n-1}} \qquad \bar{x}^2 = (34,97)^2 = 1222,9009$$

x_i	f_{ri}	$x_i^2 f_{ri}$
25,95	54	36363,735
33,25	36	39800,25
40,55	9	14798,7225
47,85	1	2289,6225
55,15	9	27373,7025
62,45	9	35100,0225
69,75	0	0
77,05	2	11873,405
		167599,6625

$$s = \sqrt{\frac{167599,6625}{119} - \frac{146748,108}{119}}$$

$$s = \sqrt{174,8870126} = 13,2245$$

8) $as = \frac{3(\bar{x} - \tilde{x})}{s} = \frac{3(34,97 - 22,8)}{13,2245} = 2,76$

Assimetria positiva $\quad \bar{x} > \tilde{x} < Mo$

9)

P_{75} –
P_{25} –
P_{10} –
P_{90} –

$P_{75} \Rightarrow \frac{(75)(120)}{100} = 90$

$P_{75} = 29,6 + \left[\frac{90 - 54}{36}\right](7,3)$

$\boxed{P_{75} = 36,9}$

Obs	f_{ri}	f_{ac}	
22,3 ⊢ 29,6	54	54	← 25, 10
29,6 ⊢ 36,9	36	90	← 75
36,9 ⊢ 44,2	9	99	
44,2 ⊢ 51,5	1	100	
51,5 ⊢ 58,8	9	109	← 90
58,8 ⊢ 66,1	9	118	
66,1 ⊢ 73,4	0	118	
73,4 ⊢ 80,7	2	120	

$P_{25} \rightarrow \frac{(25)(120)}{100} = 30$

$P_{25} = 22,3 + \left[\frac{30 - 0}{54}\right](7,3) = 26,356 \rightarrow \boxed{P_{25} = 26,356}$

$P_{10} \rightarrow \frac{(10)(120)}{100} = 12$

$P_{10} = 22,3 + \left[\frac{12 - 0}{54}\right](7,3) = 23,9 \rightarrow \boxed{P_{10} = 23,92}$

$P_{90} \rightarrow \frac{(90)(120)}{100} = 108$

$P_{90} = 51,5 + \left[\frac{108 - 100}{9}\right](7,3) = 57,989 \rightarrow \boxed{P_{90} = 57,989}$

$C = \frac{P_{75} - P_{25}}{2(P_{90} - P_{10})} = \frac{(36,9 - 26,356)}{2(57,989 - 23,92)} = 0,1547$

$\boxed{C < 0,263 \rightarrow \text{Leptocúrtica}}$.