

Universidade Estadual de Campinas
Métodos em Análise Multivariada

Trabalho ME731

Parte 1

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1 INTRODUÇÃO

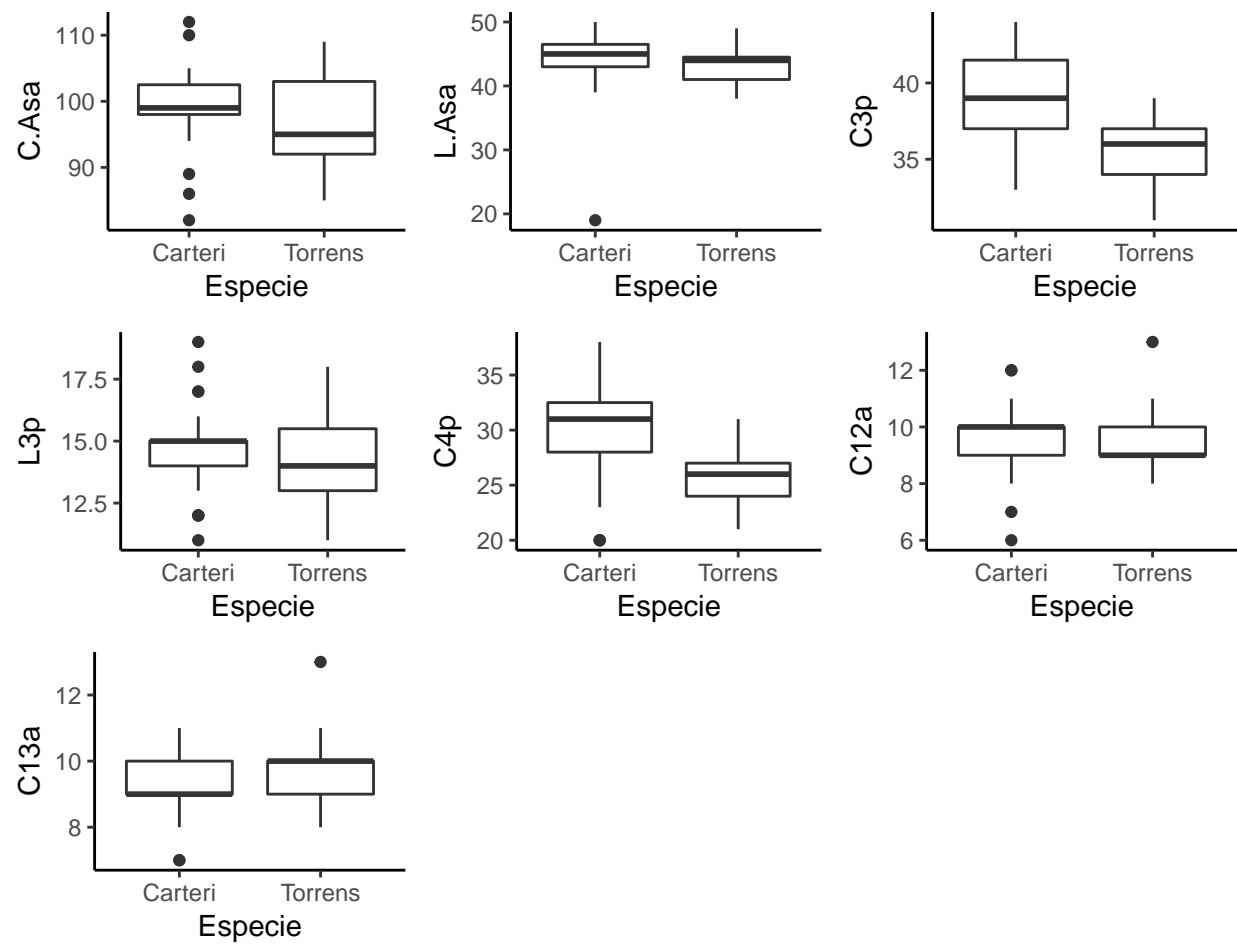
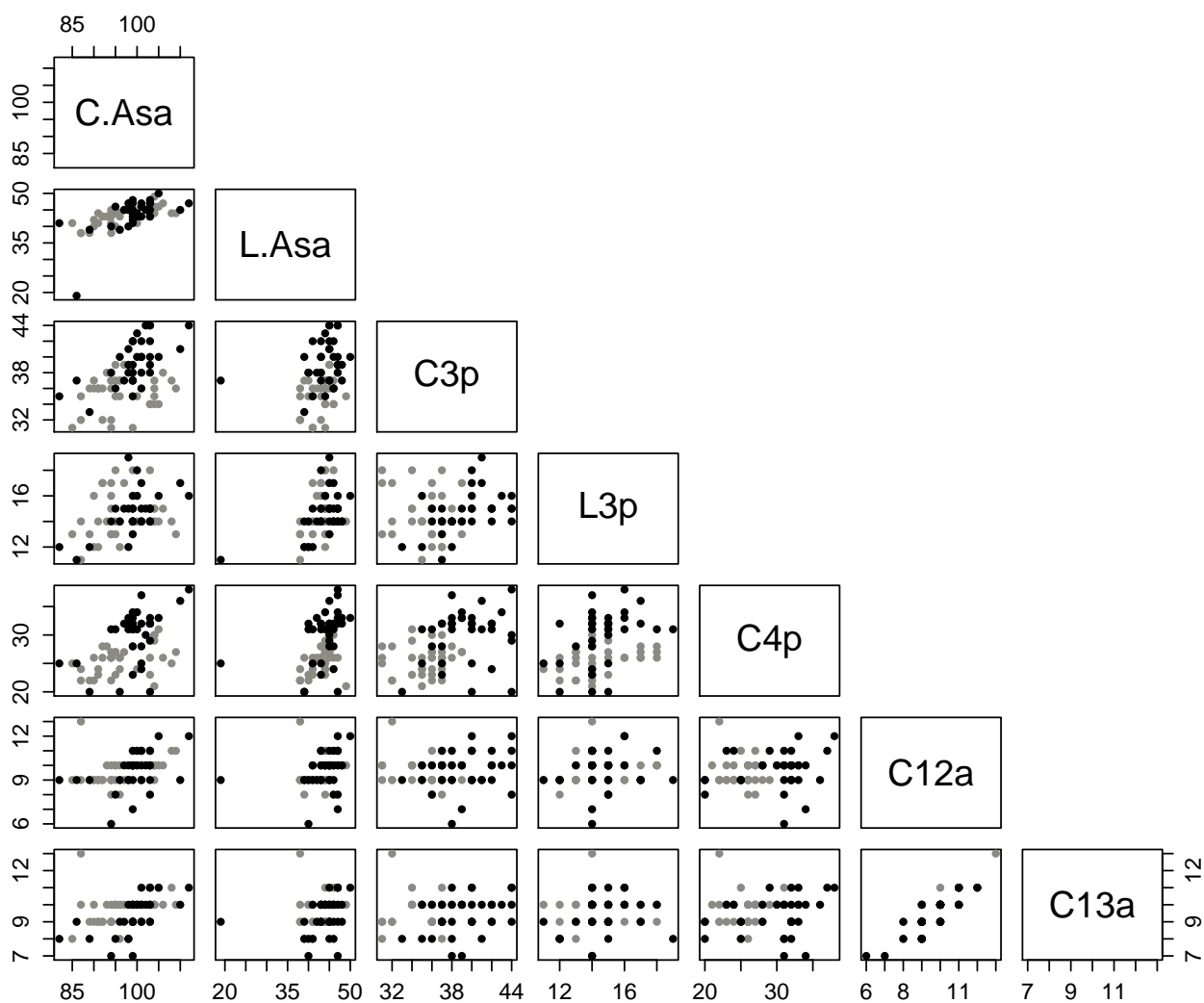


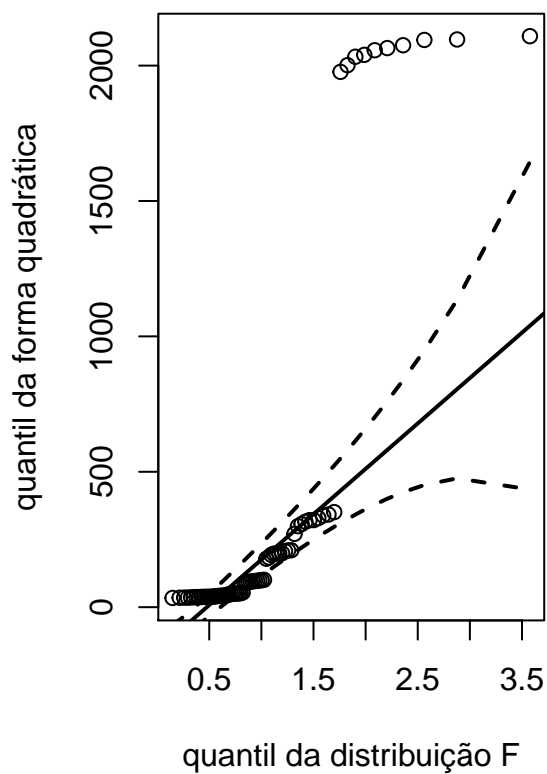
Figure 1: BoxPlots

Gráfico de Dispersão

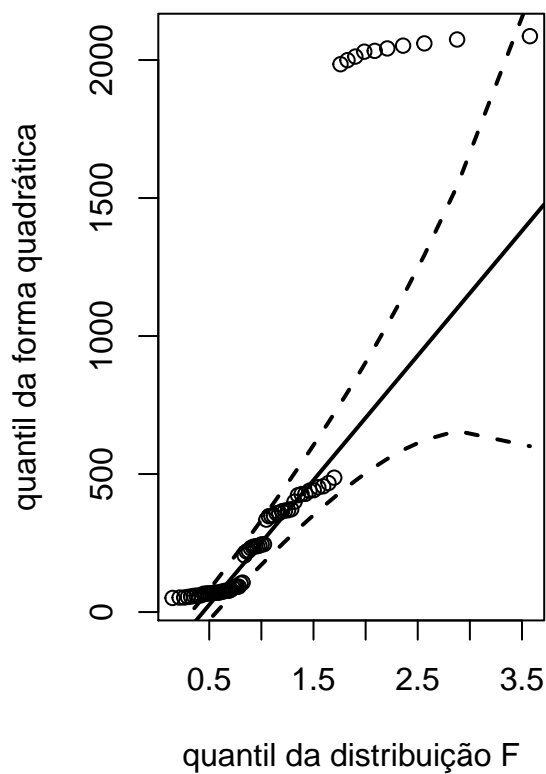


	C.Asa	L.Asa	C3p	L3p	C4p	C12a	C13a
TORRENS							
C.Asa	40,73	0,67	0,17	0,19	0,39	0,32	0,29
L.Asa	11,72	7,49	0,30	0,37	0,48	0,13	0,12
C3p	2,33	1,83	4,83	-0,19	0,11	-0,18	0,09
L3p	2,20	1,84	-0,78	3,38	0,37	0,10	0,00
C4p	6,26	3,26	0,61	1,70	6,24	-0,01	-0,02
C12a	1,88	0,32	-0,37	0,17	-0,02	0,84	0,78
C13a	1,66	0,30	0,17	0,00	-0,05	0,64	0,80
CARTERI							
	C.Asa	L.Asa	C3p	L3p	C4p	C12a	C13a
C.Asa	31,29	0,61	0,62	0,56	0,50	0,42	0,60
L.Asa	17,47	25,79	0,26	0,50	0,38	0,28	0,28
C3p	9,83	3,70	8,04	0,46	0,20	0,22	0,38
L3p	5,15	4,14	2,17	2,70	0,41	0,18	0,25
C4p	12,88	8,94	2,62	3,12	21,29	0,20	0,26
C12a	2,97	1,79	0,79	0,38	1,15	1,58	0,87
C13a	3,63	1,57	1,17	0,46	1,32	1,19	1,18

Especie Torrens

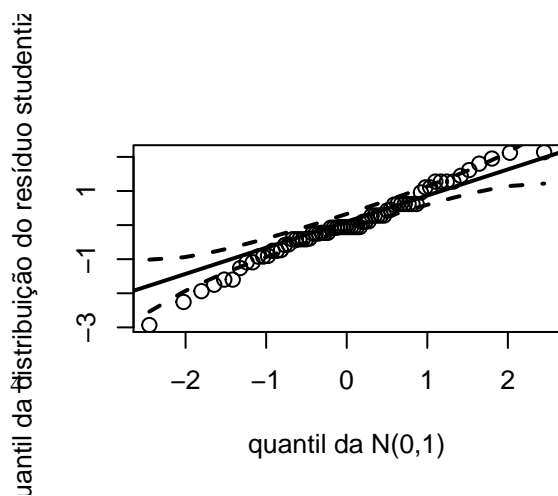
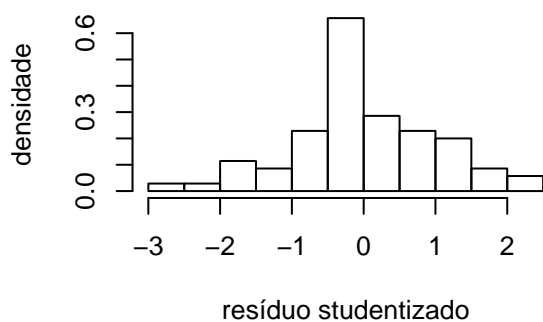
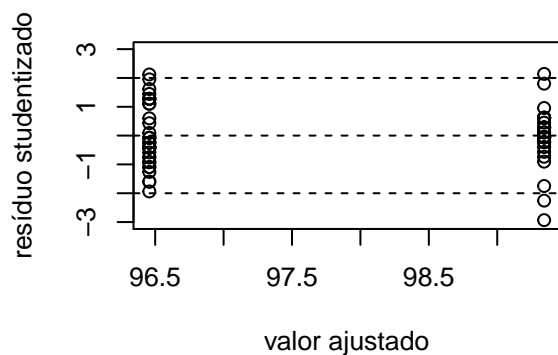
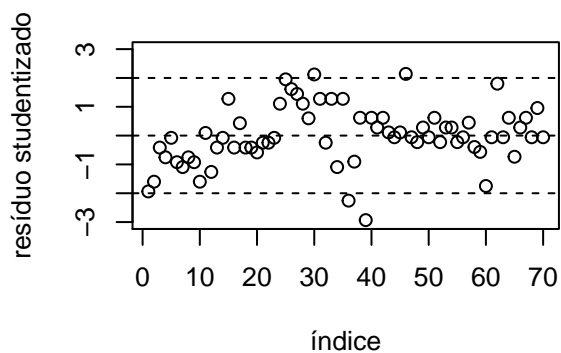


Especie Carteri



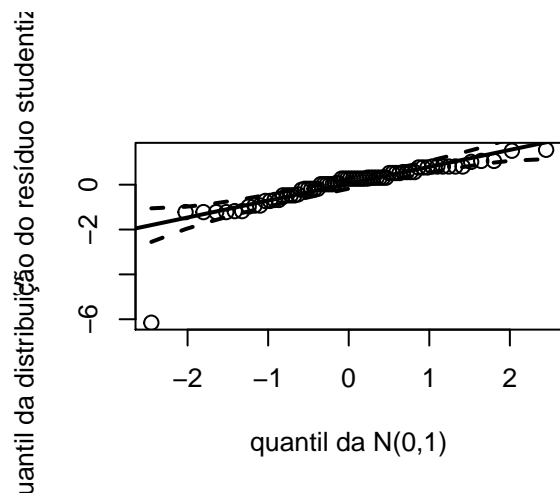
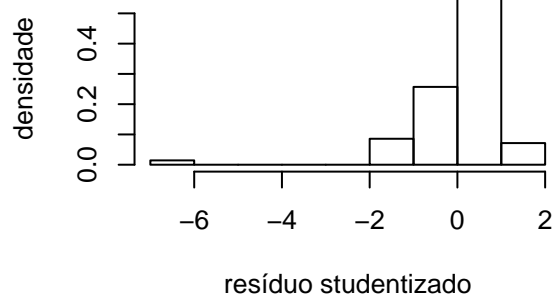
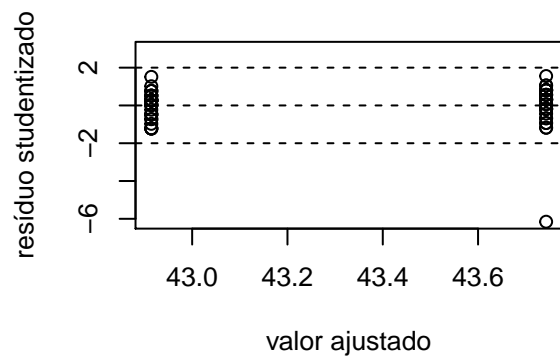
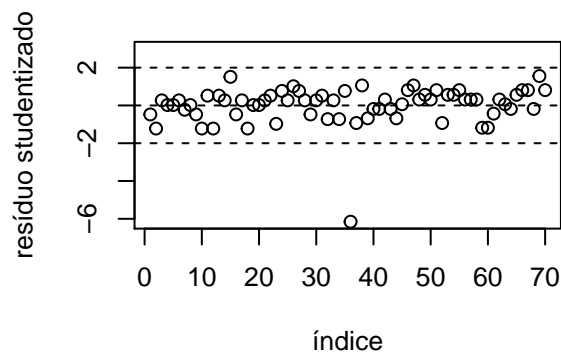
Variável	Especie	Média	DP	Var	CV	Mínimo	Mediana	Máximo	n
C.Asa	Carteri	99,34	5,59	31,29	5,63	82	99,00	112	35
	Torrens	96,46	6,38	40,73	6,62	85	95,00	109	35
L.Asa	Carteri	43,74	5,08	25,78	11,61	19	45,00	50	35
	Torrens	42,91	2,74	7,49	6,38	38	44,00	49	35
C3p	Carteri	39,31	2,84	8,05	7,21	33	39,00	44	35
	Torrens	35,37	2,20	4,83	6,21	31	36,00	39	35
L3p	Carteri	14,66	1,64	2,70	11,22	11	15,00	19	35
	Torrens	14,51	1,84	3,37	12,66	11	14,00	18	35
C4p	Carteri	30,00	4,61	21,29	15,38	20	31,00	38	35
	Torrens	25,63	2,50	6,24	9,75	21	26,00	31	35
C12a	Carteri	9,66	1,26	1,58	13,04	6	10,00	12	35
	Torrens	9,57	0,92	0,84	9,58	8	9,00	13	35
C13a	Carteri	9,37	1,09	1,18	11,60	7	9,00	11	35
	Torrens	9,71	0,89	0,80	9,20	8	10,00	13	35

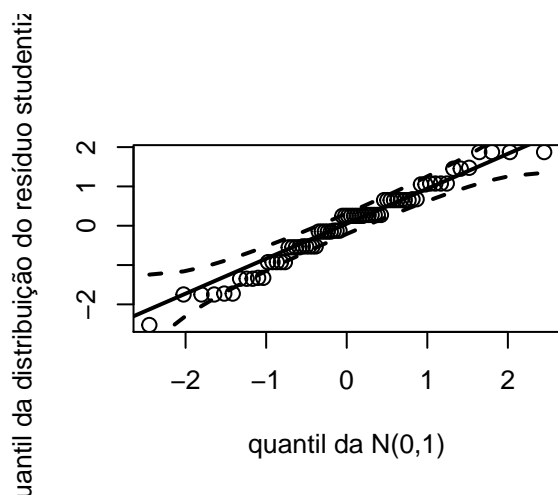
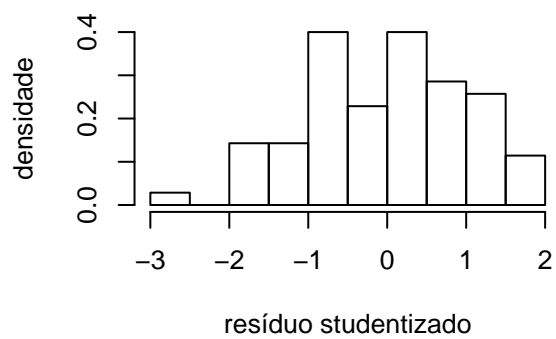
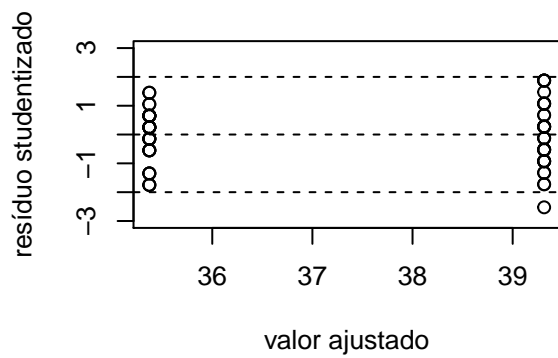
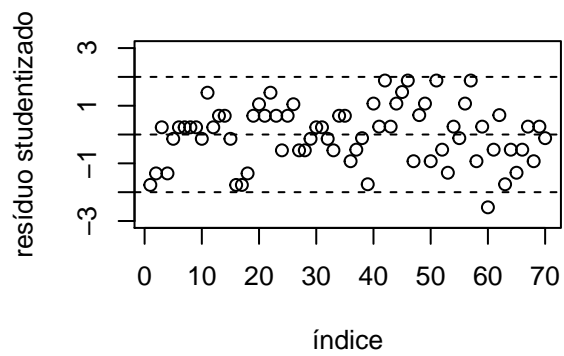
Estatística	Valor	Aprox. Dist. F	P-Valor
Wilks	0,39	13,82	<0,01
Pillai	0,61	13,82	<0,01
Hotteling-Lawley	1,56	13,82	<0,01
Roy	1,56	13,82	<0,01

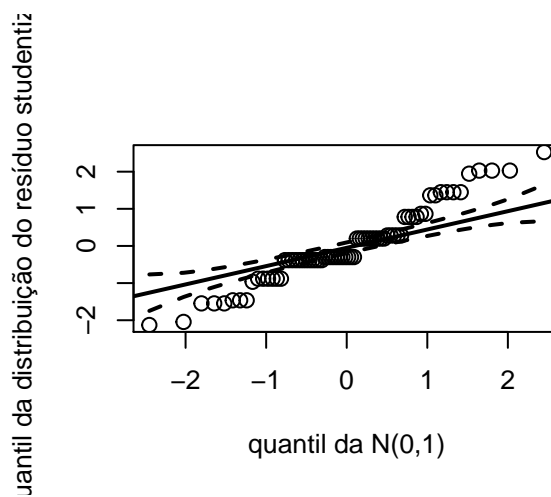
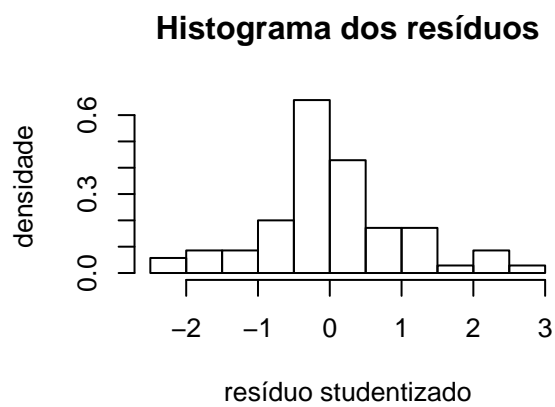
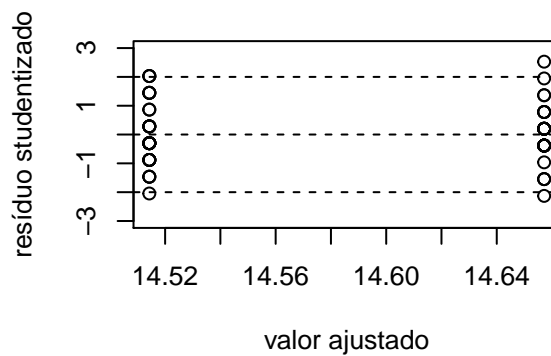
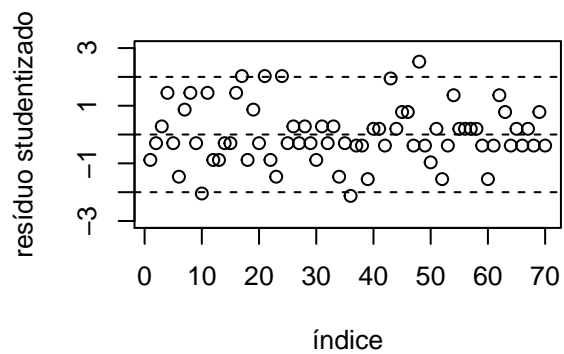


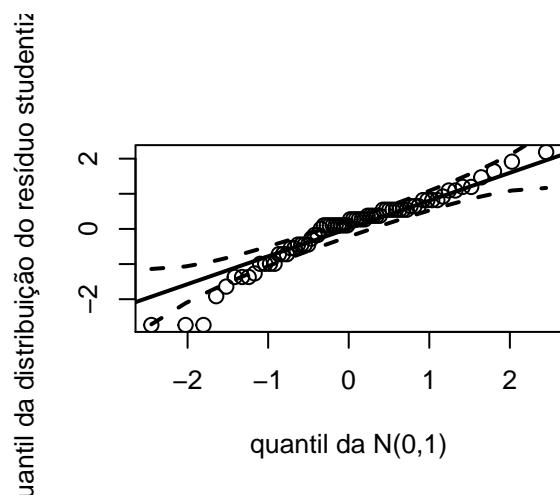
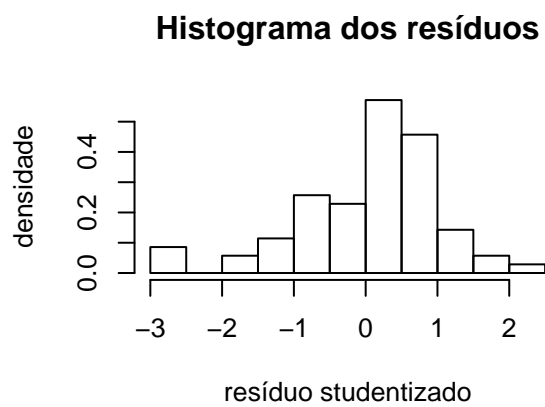
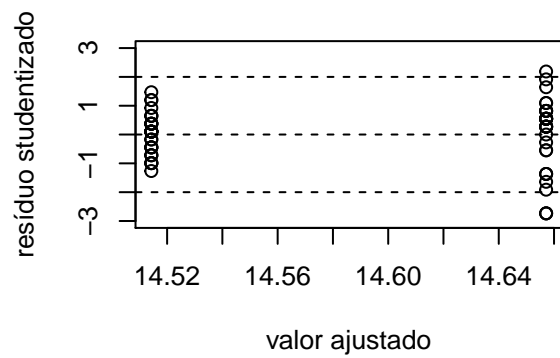
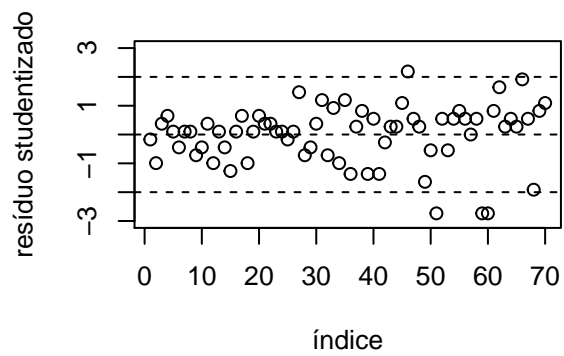
Variável	Parâmetro	Estimativa	Erro Padrão	Valor t	p-valor
C.Asa	μ_1	96,46	1,01	95,10	<0,01
	α_1	2,89	1,43	2,01	0,05
L.Asa	μ_1	42,91	0,69	62,24	<0,01
	α_1	0,83	0,98	0,85	0,40
C3p	μ_1	35,37	0,43	82,48	<0,01
	α_1	3,94	0,61	6,50	<0,01
L3p	μ_1	14,51	0,29	49,26	<0,01
	α_1	0,14	0,42	0,34	0,73
C4p	μ_1	25,63	0,63	40,86	<0,01
	α_1	4,37	0,89	4,93	<0,01
C12a	μ_1	9,57	0,19	51,42	<0,01
	α_1	0,09	0,26	0,33	0,75
C13a	μ_1	9,71	0,17	57,76	<0,01
	α_1	-0,34	0,24	-1,44	0,15

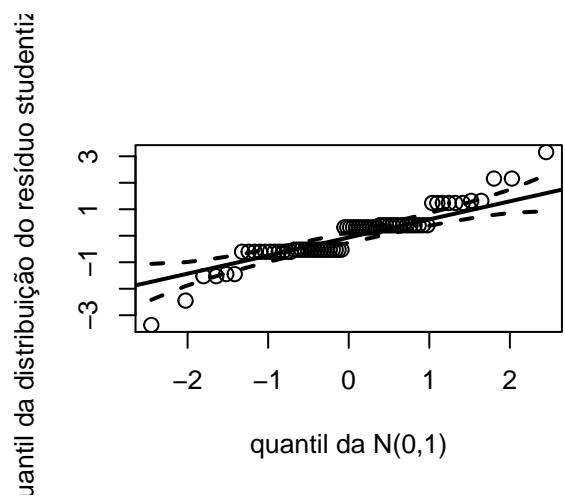
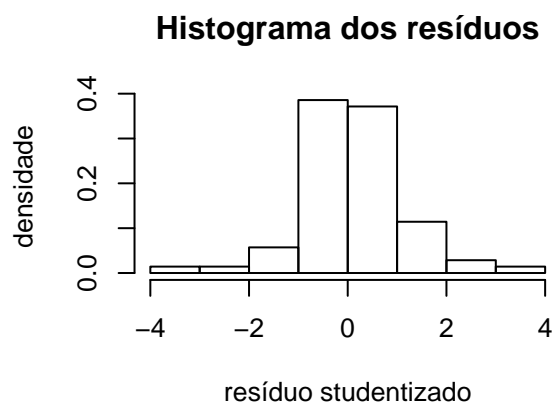
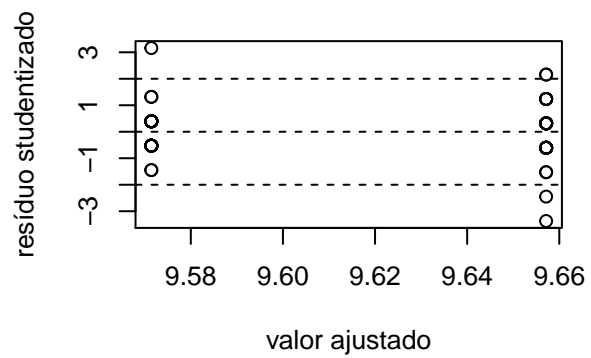
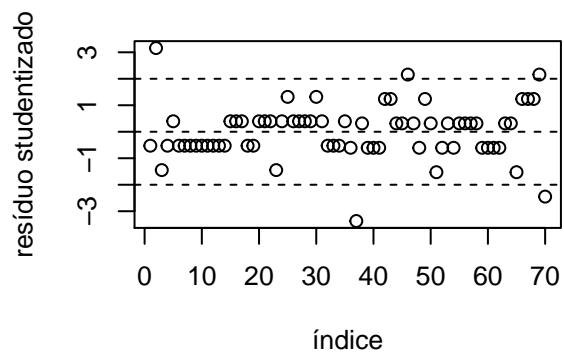
Variável	Estatística	p-valor
C.Asa	4,05	0,00
L.Asa	0,72	0,40
C3p	42,26	0,00
L3P	0,12	0,73
C4p	24,29	0,00
C12a	0,11	0,75
C13a	2,08	0,15

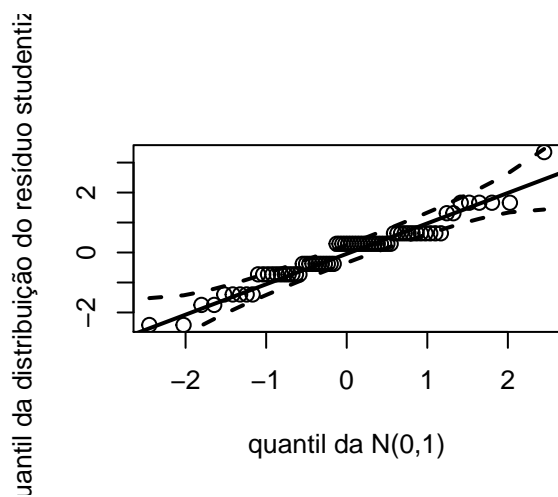
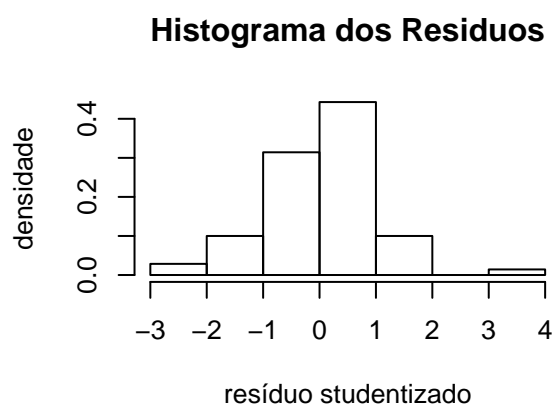
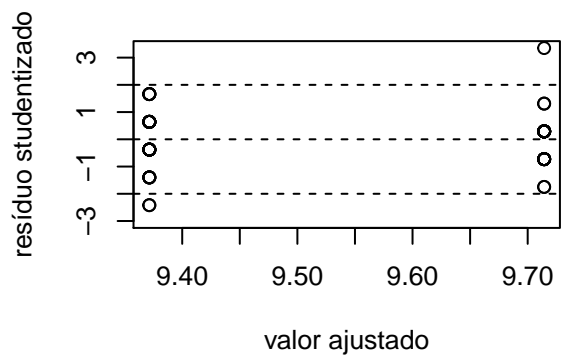
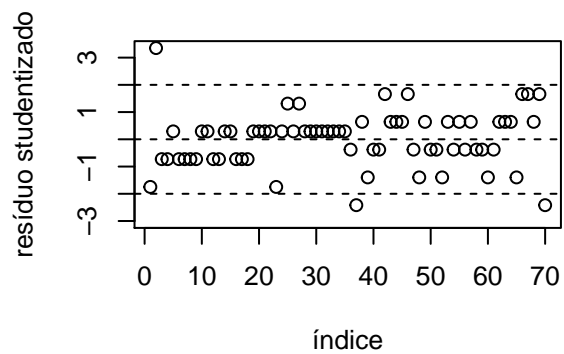










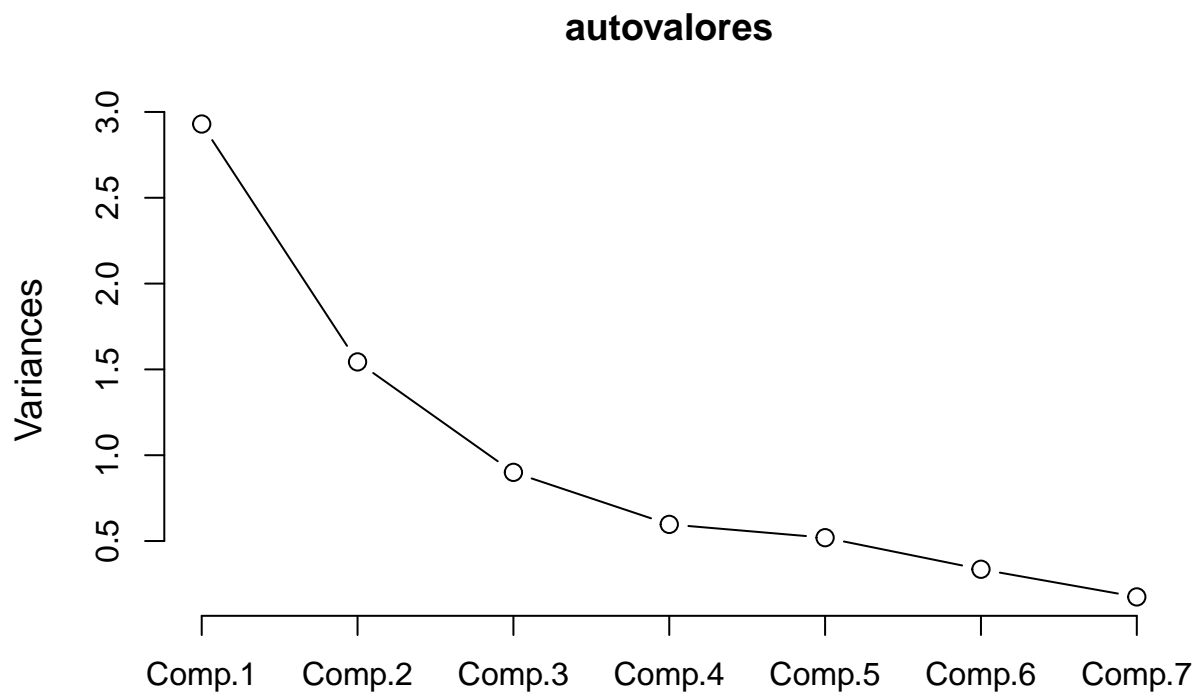


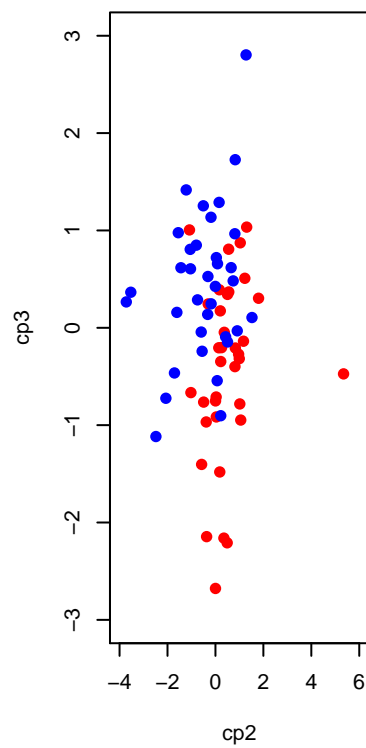
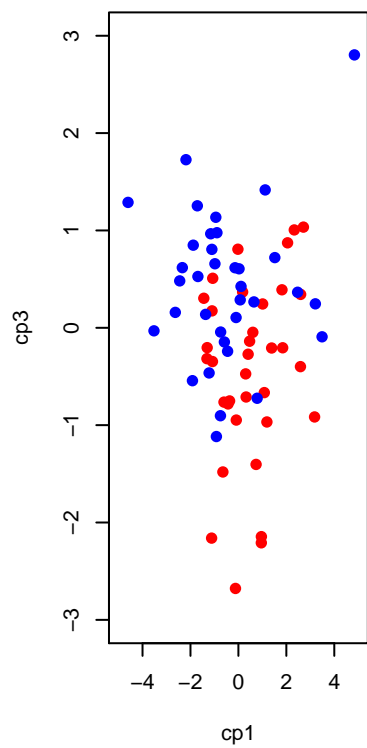
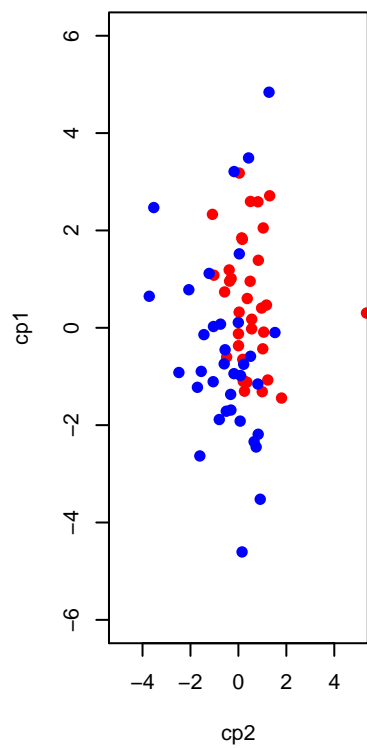
1.1 QUESTÃO 2

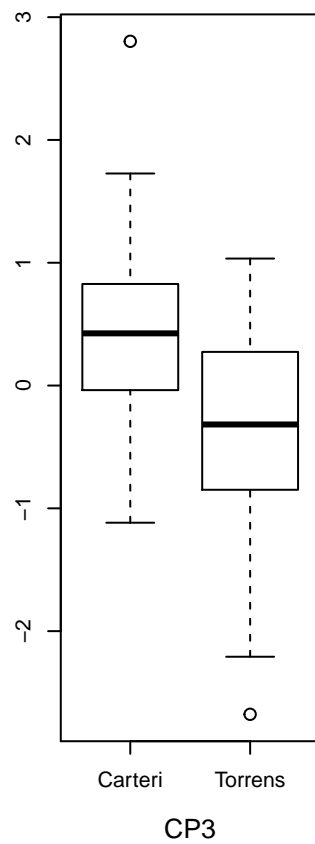
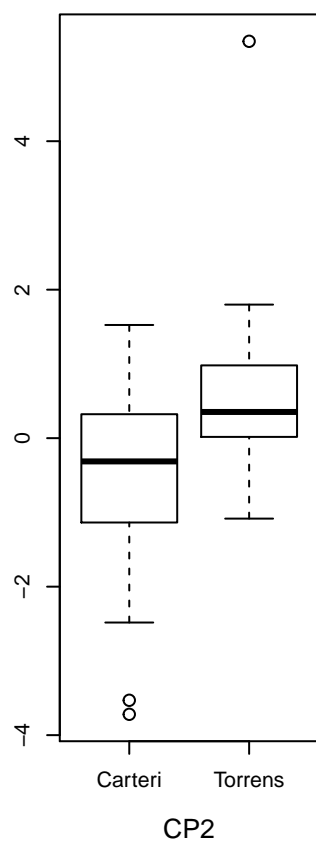
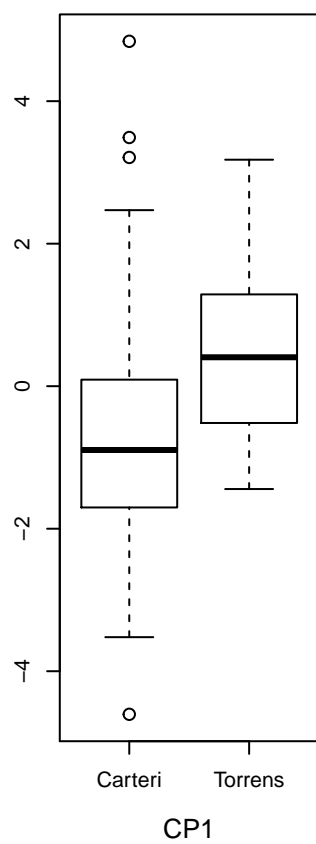
Importance of components:

##	Comp.1	Comp.2	Comp.3	Comp.4	Comp.5
## Standard deviation	1.7116366	1.2424549	0.9487536	0.77266752	0.72078630
## Proportion of Variance	0.4185286	0.2205277	0.1285905	0.08528787	0.07421898
## Cumulative Proportion	0.4185286	0.6390563	0.7676468	0.85293466	0.92715364

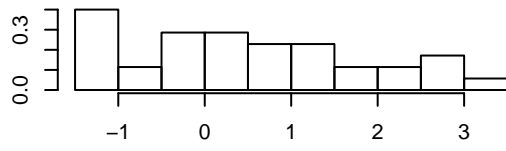
##	Comp.6	Comp.7
## Standard deviation	0.5792105	0.41765975
## Proportion of Variance	0.0479264	0.02491995
## Cumulative Proportion	0.9750800	1.00000000



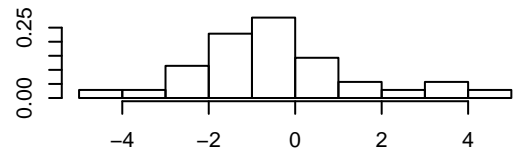




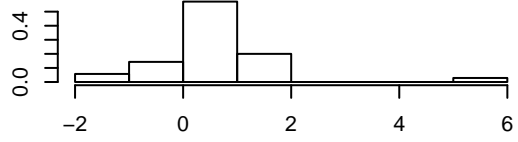
CP1



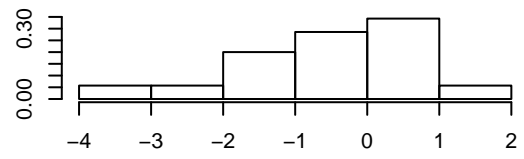
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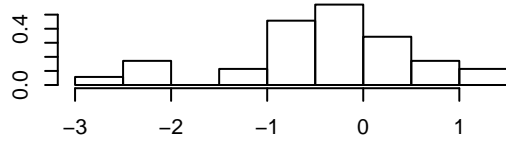
CP2



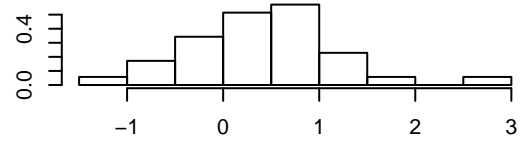
CP2

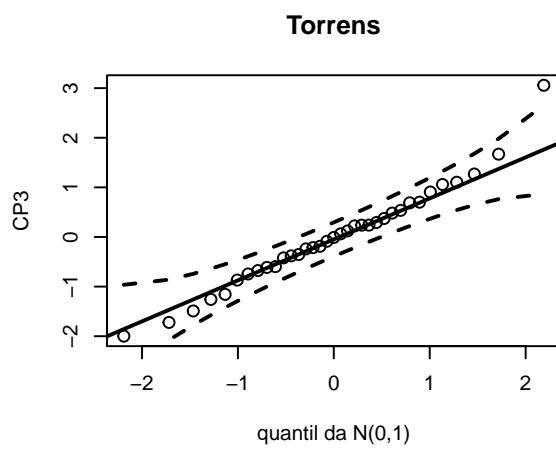
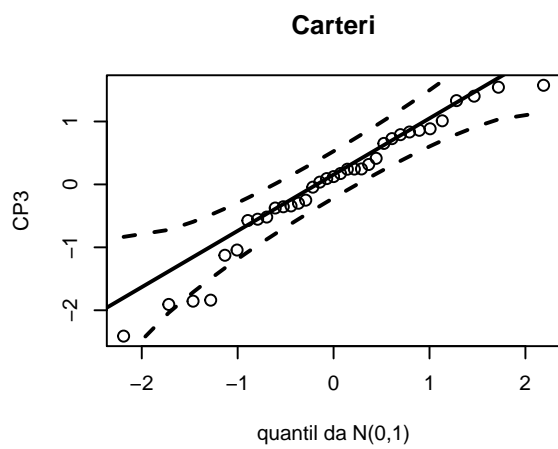
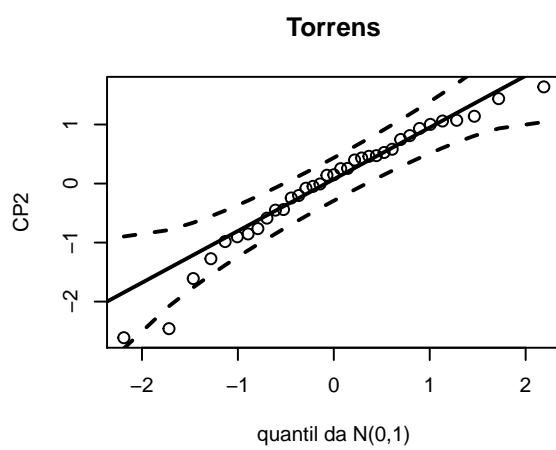
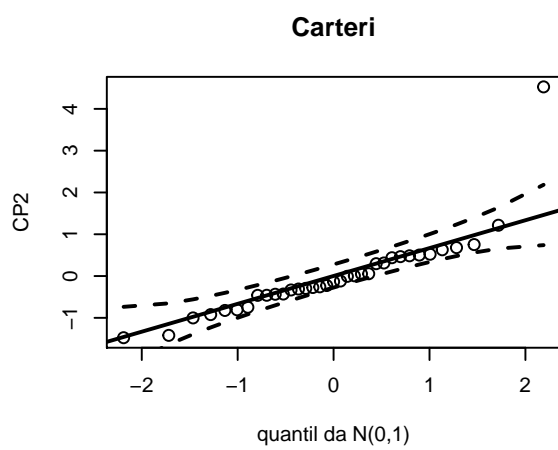
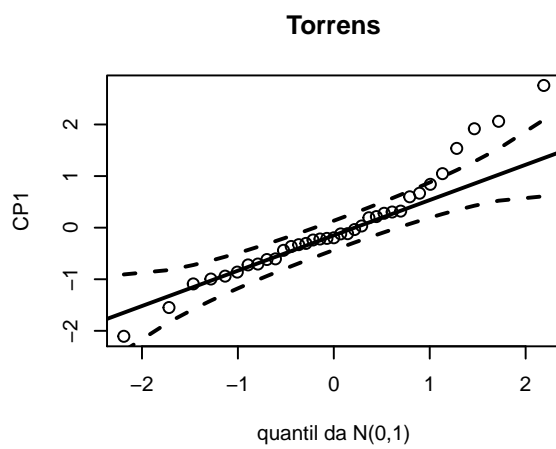
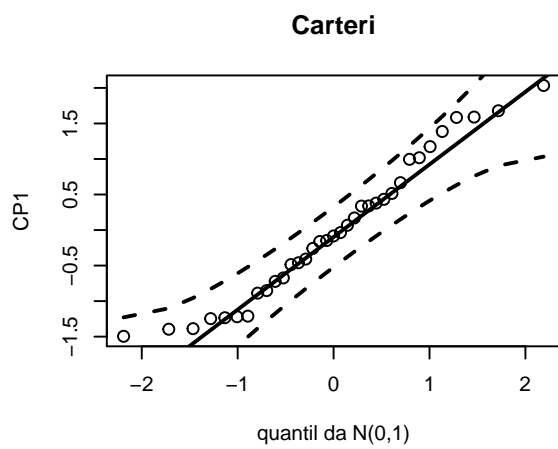


CP3



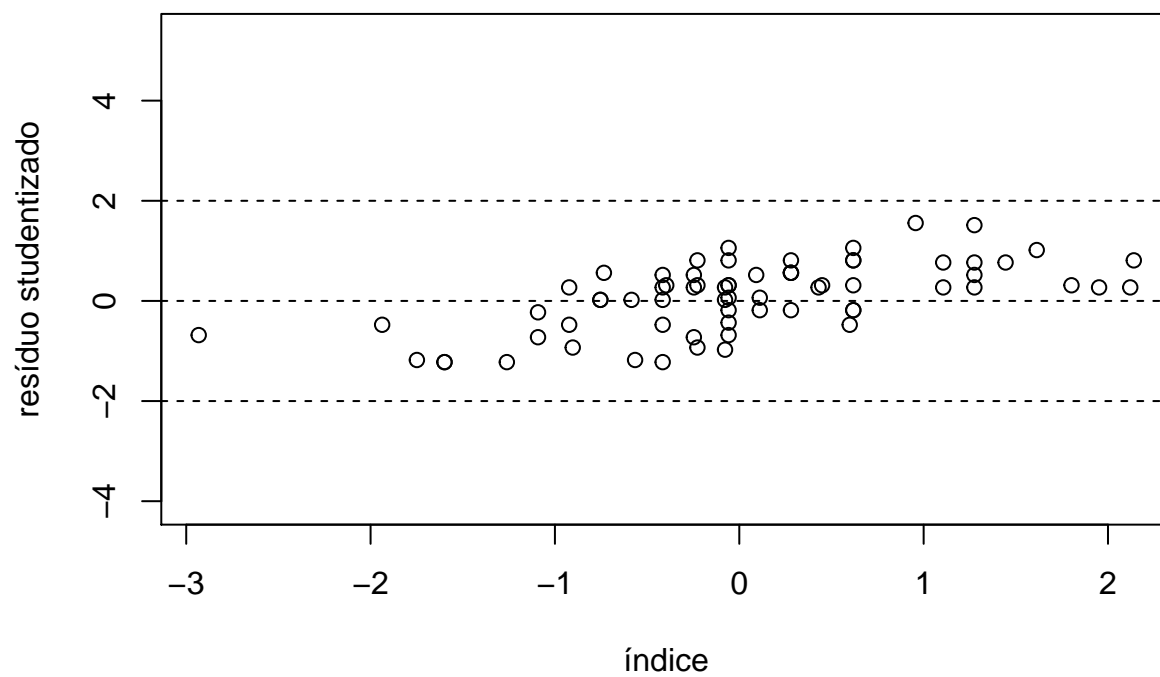
CP3

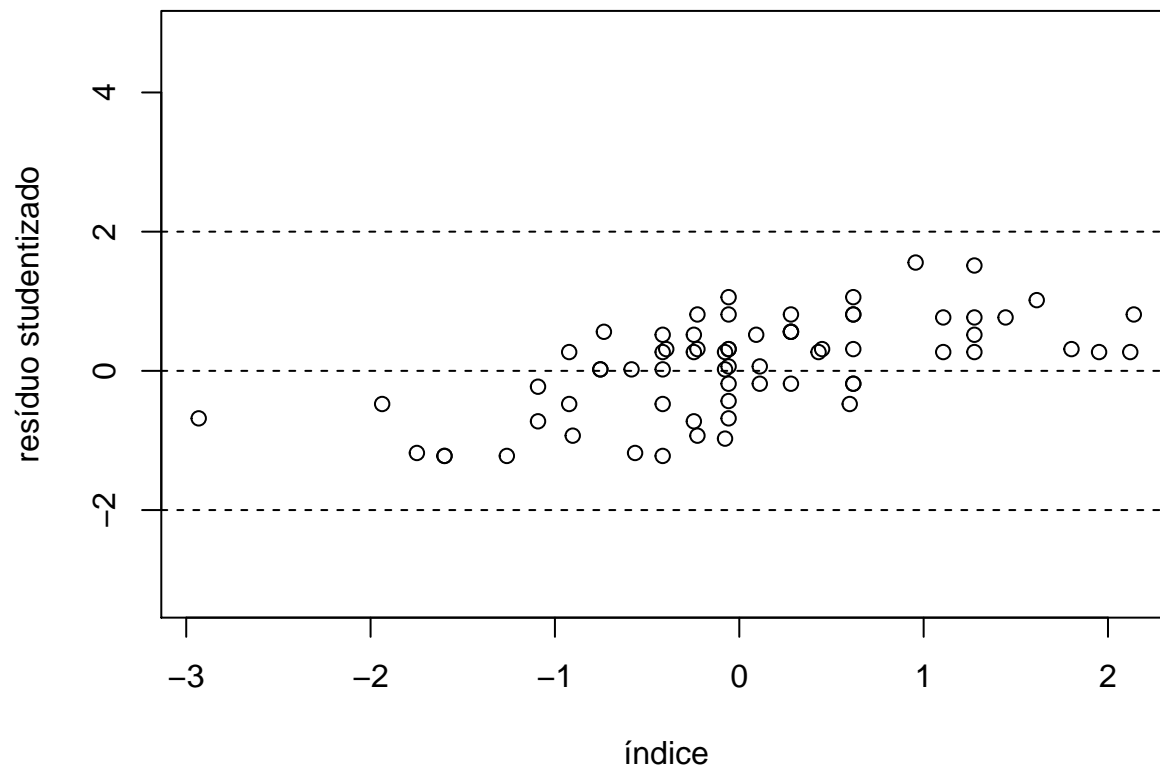


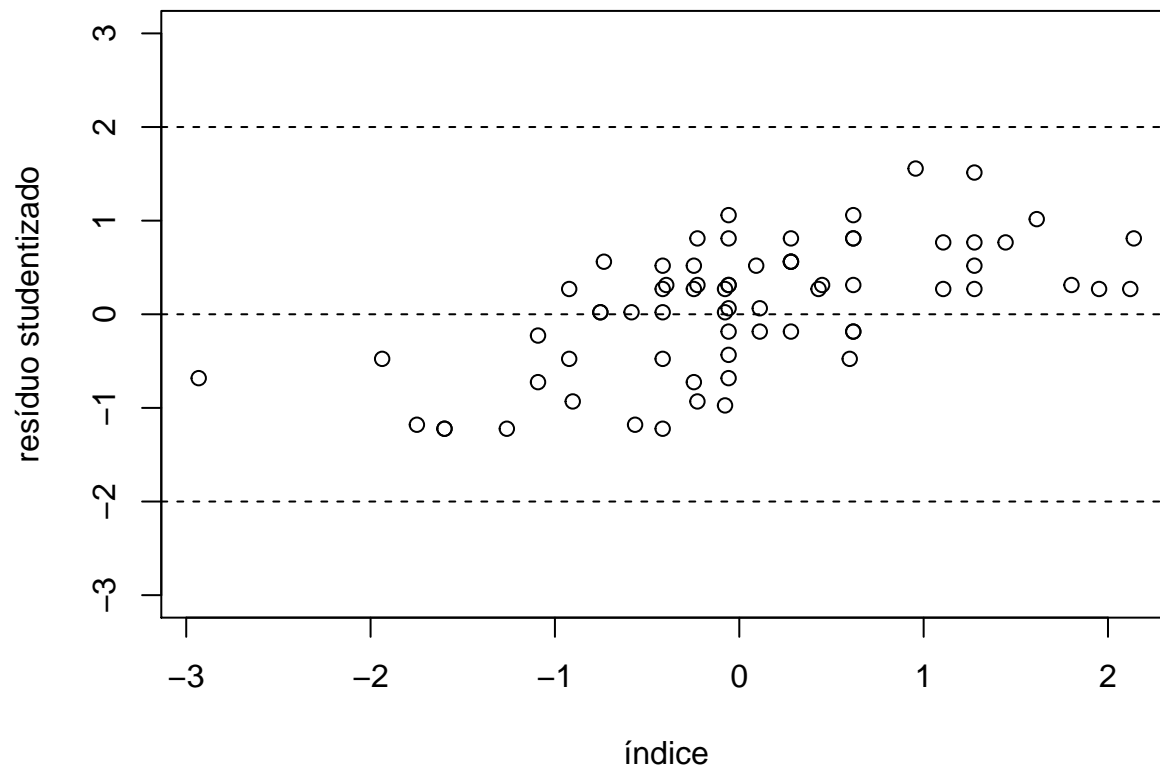


```
##
## Call:
## lm(formula = cpl ~ especief)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -4.0902 -1.1506 -0.2188  0.6618  5.3544
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.5144     0.2800  -1.837   0.0705 .
## especiefTorrens  1.0288     0.3959   2.598   0.0115 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.656 on 68 degrees of freedom
## Multiple R-squared:  0.09033,    Adjusted R-squared:  0.07695
## F-statistic: 6.752 on 1 and 68 DF,  p-value: 0.01147
```

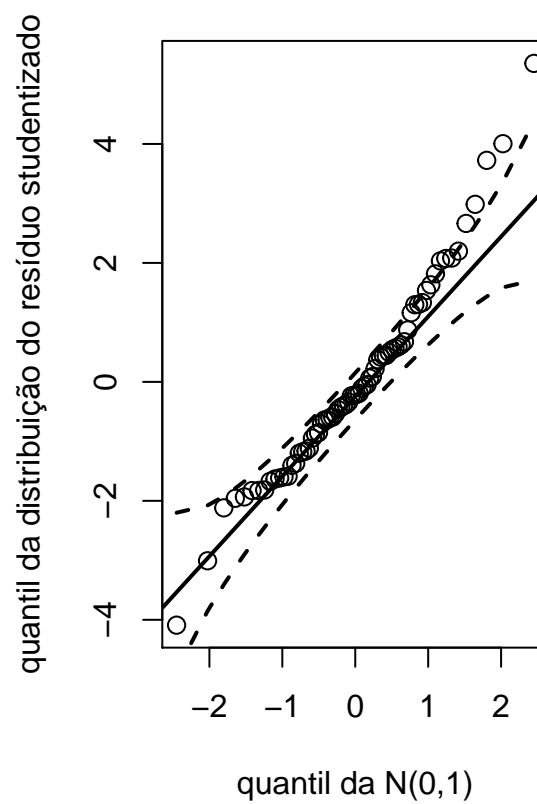
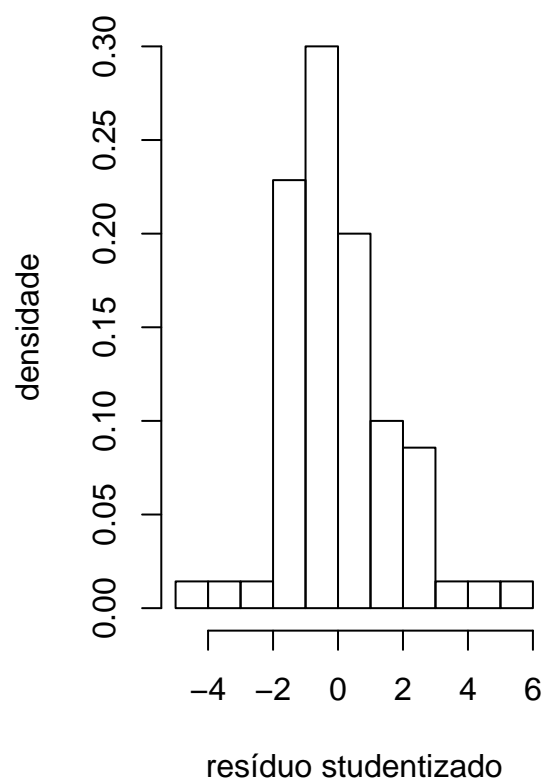
Resíduos do modelo com a Componente 1



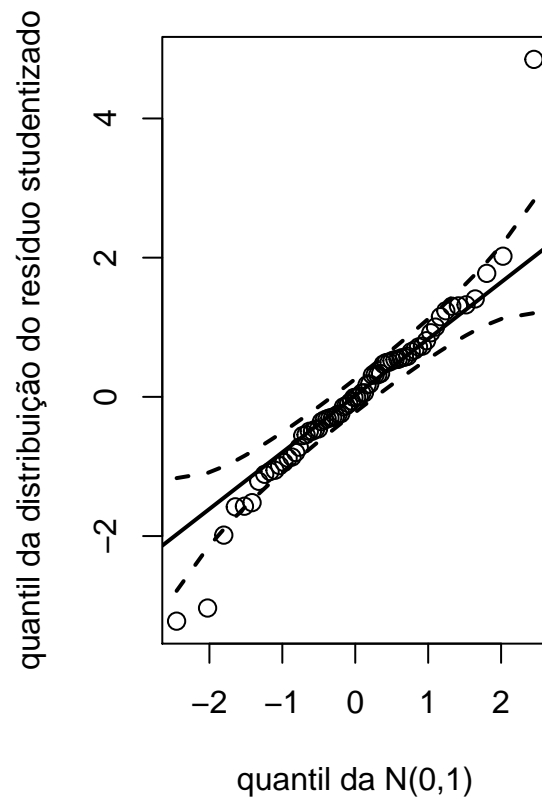
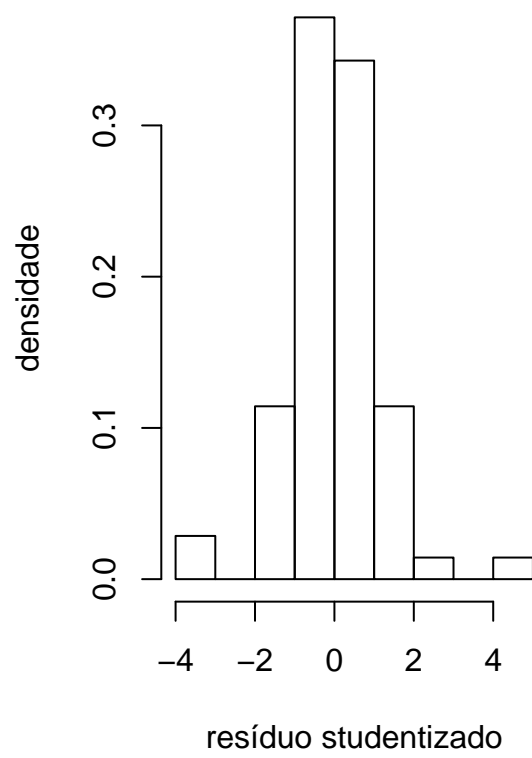




Histograma dos resíduos



Histograma dos resíduos



Histograma dos resíduos

