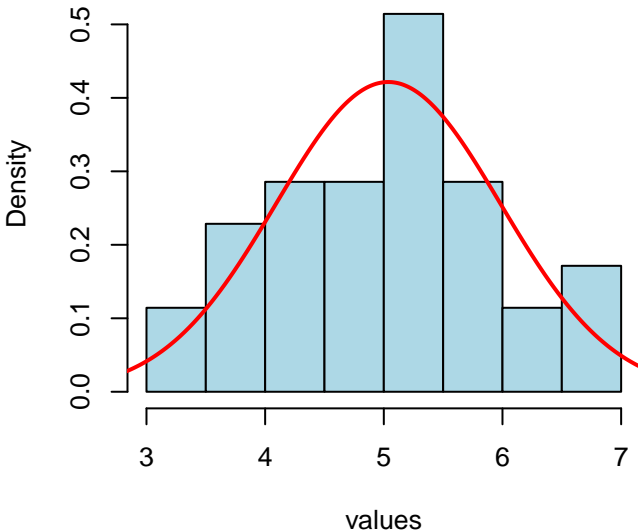


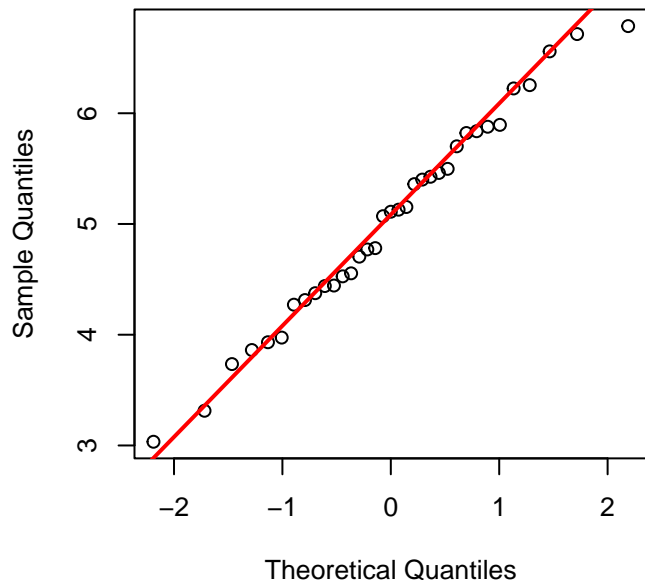
Check for normality of groups:

A – Shapiro–Wilk:  $p = 0.9$  , B – Shapiro–Wilk:  $p = 0.59$

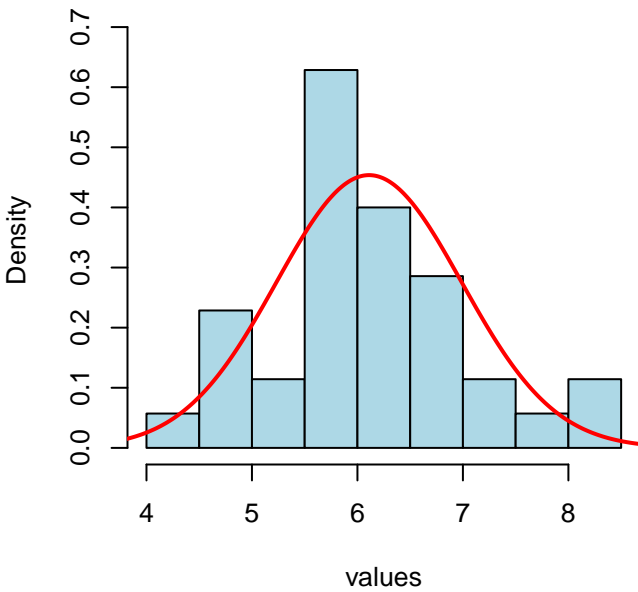
**Histogram – A**



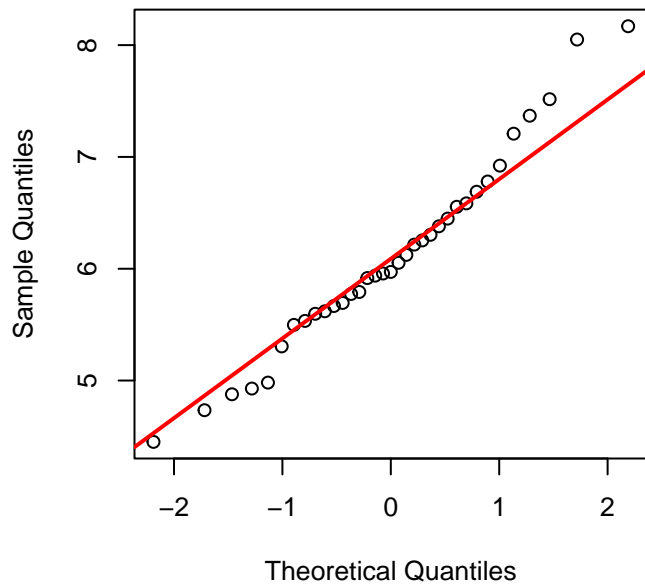
**Q-Q Plot – A**



**Histogram – B**



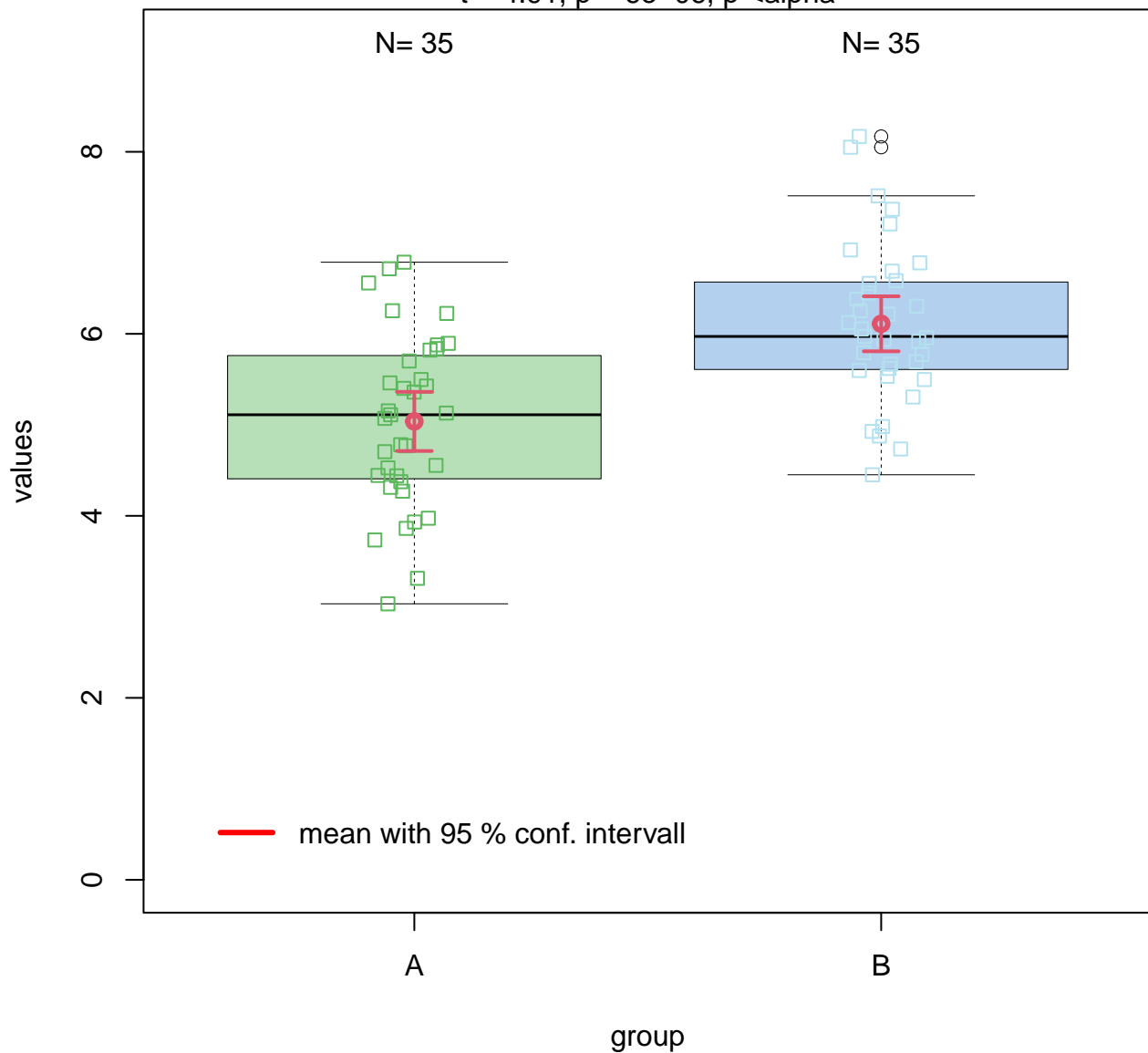
**Q-Q Plot – B**



Welch Two Sample t-test,  $\alpha = 0.05$

Null hypothesis: population mean values of group "A" equals population mean values of group

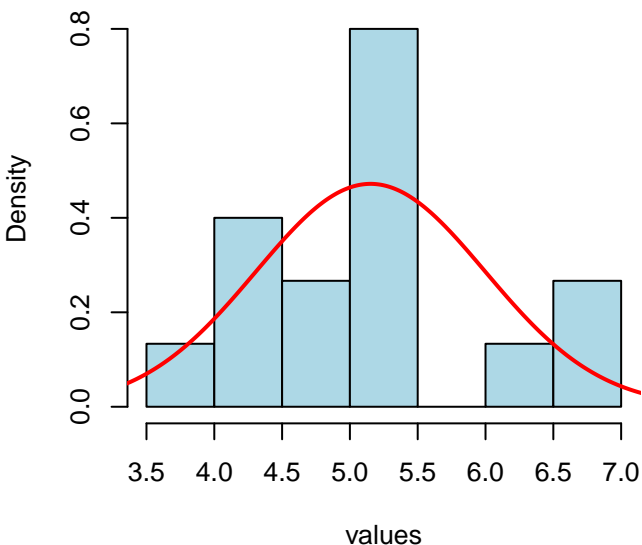
$t = -4.91$ ,  $p = 6e-06$ ,  $p < \alpha$



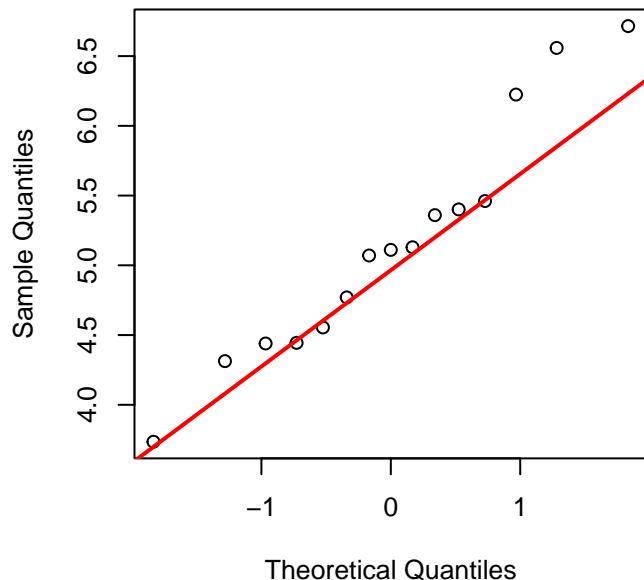
Check for normality of groups:

A – Shapiro–Wilk:  $p = 0.52$  , B – Shapiro–Wilk:  $p = 0.9$

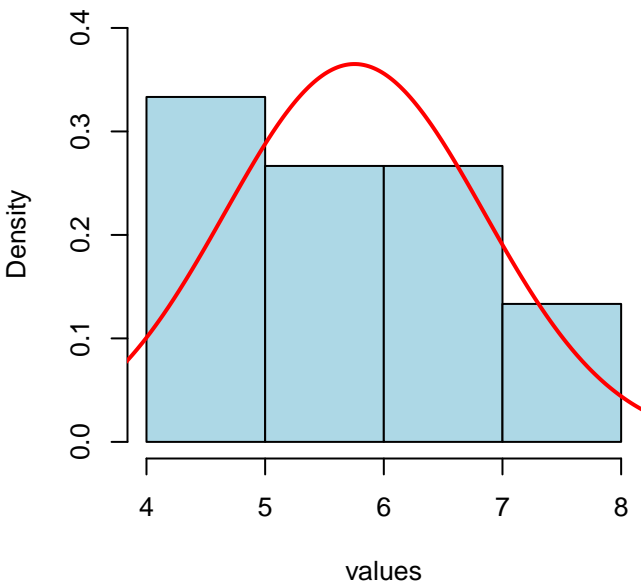
**Histogram – A**



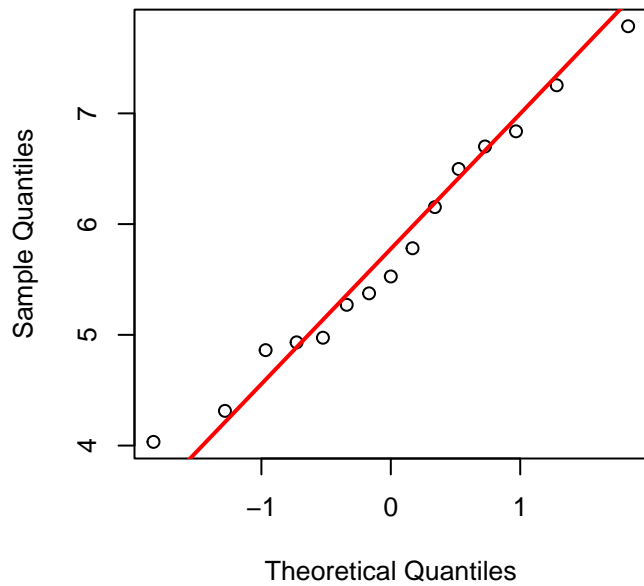
**Q-Q Plot – A**



**Histogram – B**

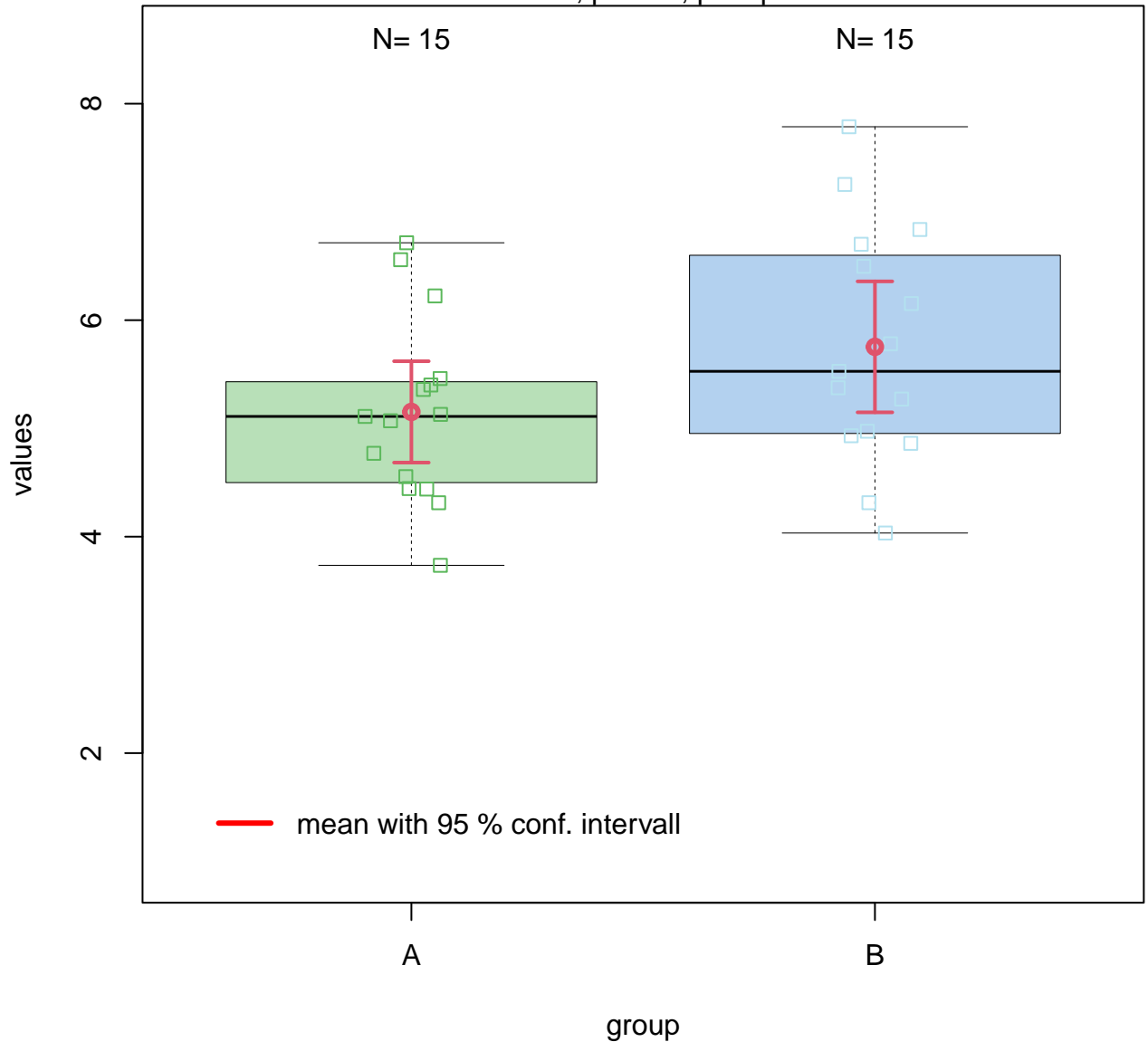


**Q-Q Plot – B**



Welch Two Sample t-test,  $\alpha = 0.05$

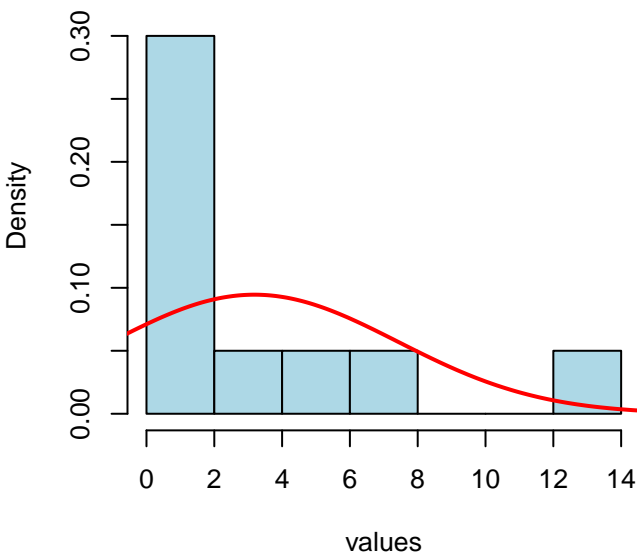
Null hypothesis: population mean values of group "A" equals population mean values of group  
 $t = -1.69$ ,  $p = 0.1$ ,  $p > \alpha$



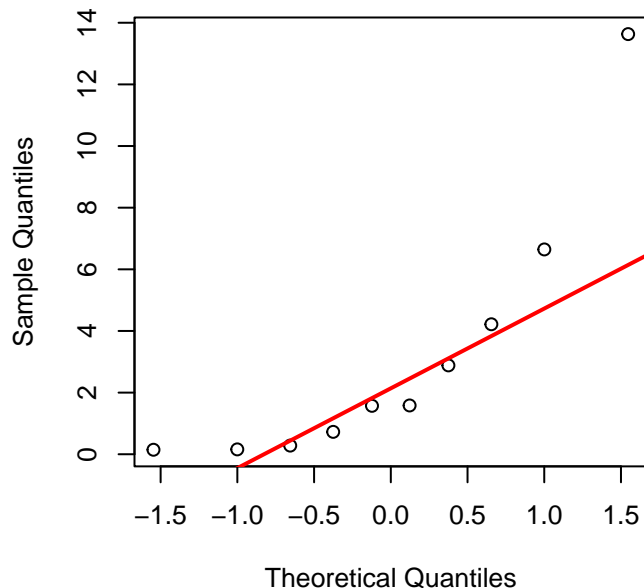
Check for normality of groups:

A – Shapiro–Wilk:  $p = 0.0038$  , B – Shapiro–Wilk:  $p = 0.00037$

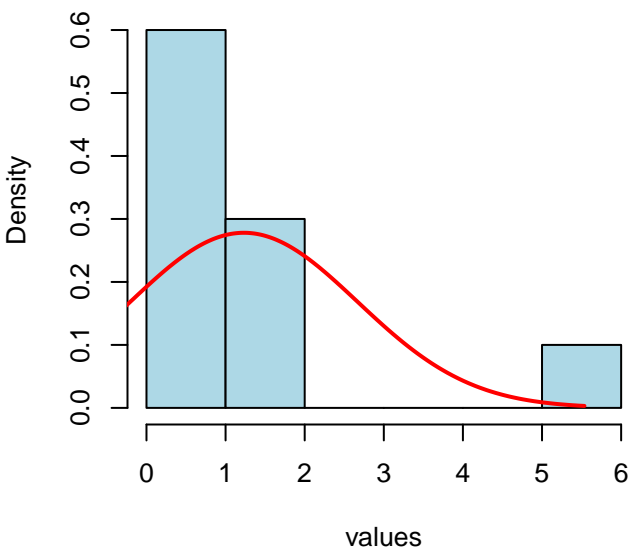
**Histogram – A**



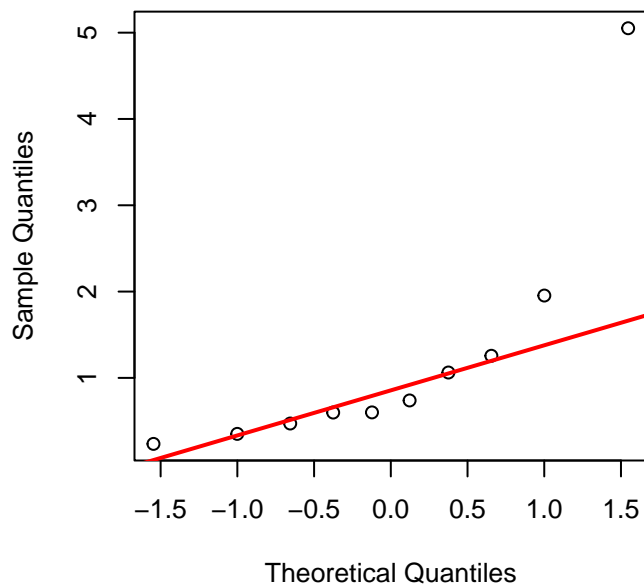
**Q-Q Plot – A**



**Histogram – B**



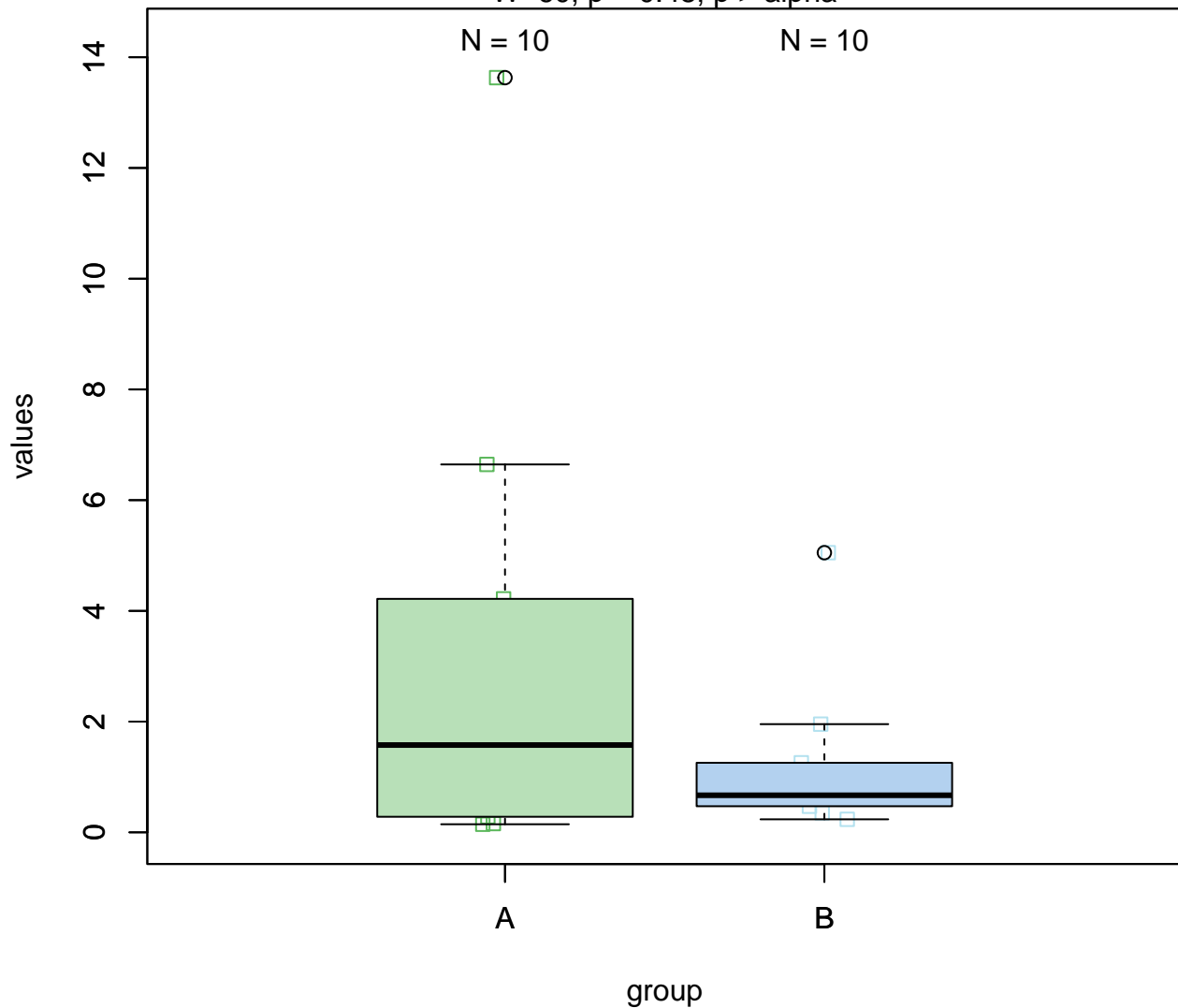
**Q-Q Plot – B**



Wilcoxon rank sum exact test,  $\alpha = 0.05$

Null hypoth.: population median values of group A equals population median values of group

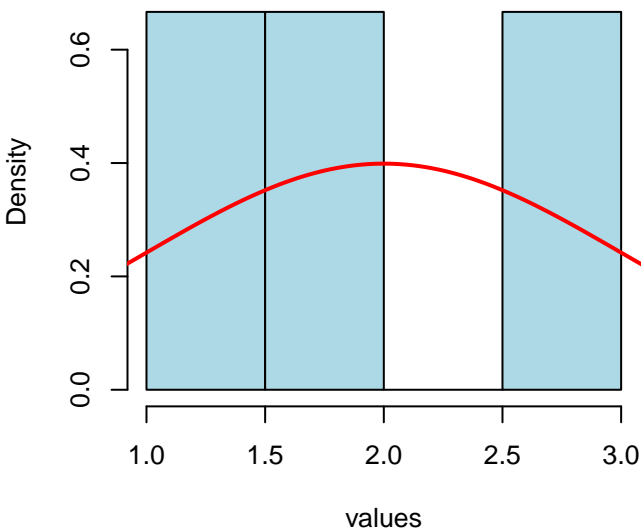
$W=60$ ,  $p = 0.48$ ,  $p > \alpha$



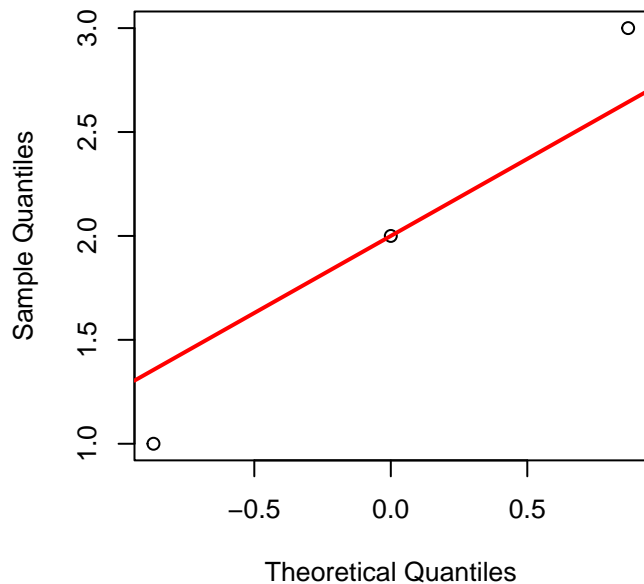
Check for normality of groups:

A – Shapiro–Wilk:  $p = 1$  , B – Shapiro–Wilk:  $p = 1$

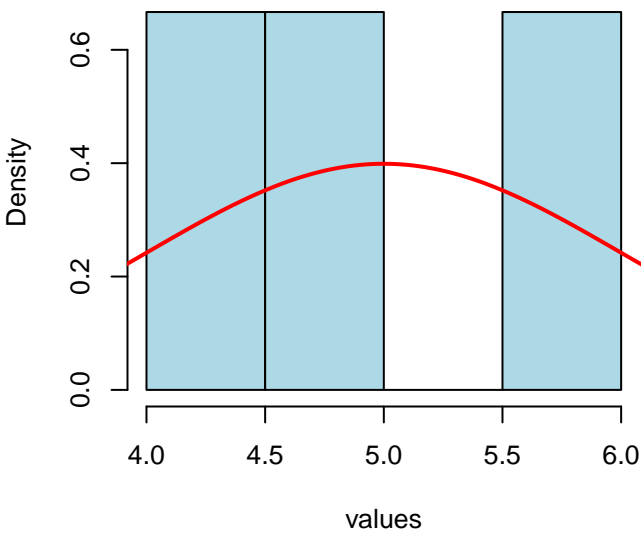
**Histogram – A**



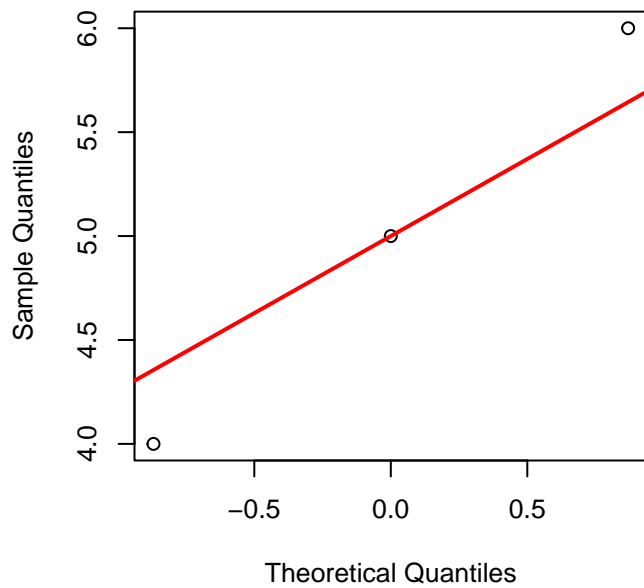
**Q–Q Plot – A**



**Histogram – B**



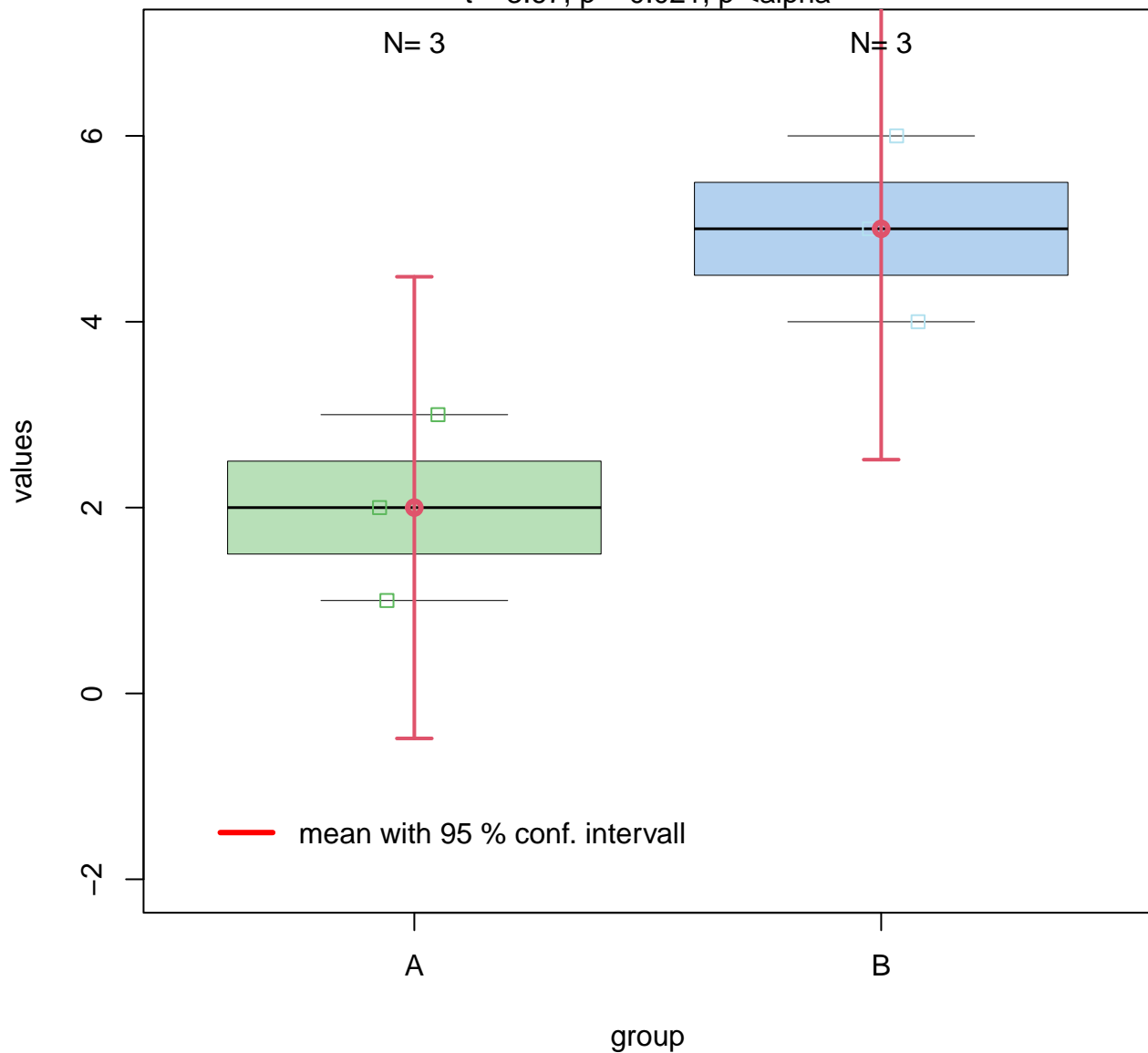
**Q–Q Plot – B**



Welch Two Sample t-test,  $\alpha = 0.05$

Null hypothesis: population mean values of group "A" equals population mean values of group

$t = -3.67$ ,  $p = 0.021$ ,  $p < \alpha$

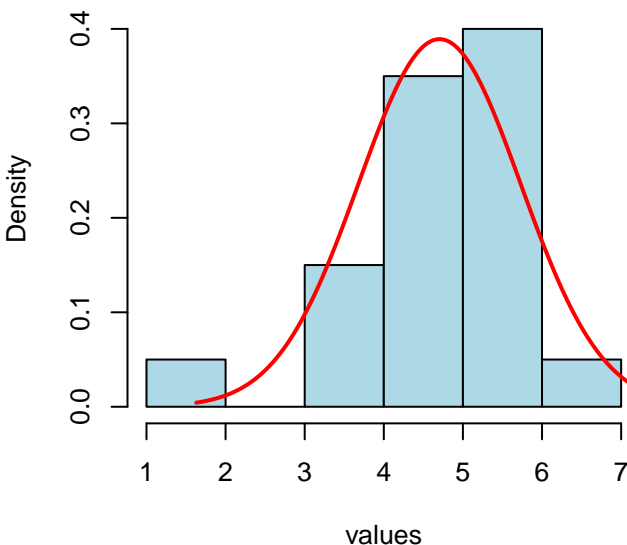




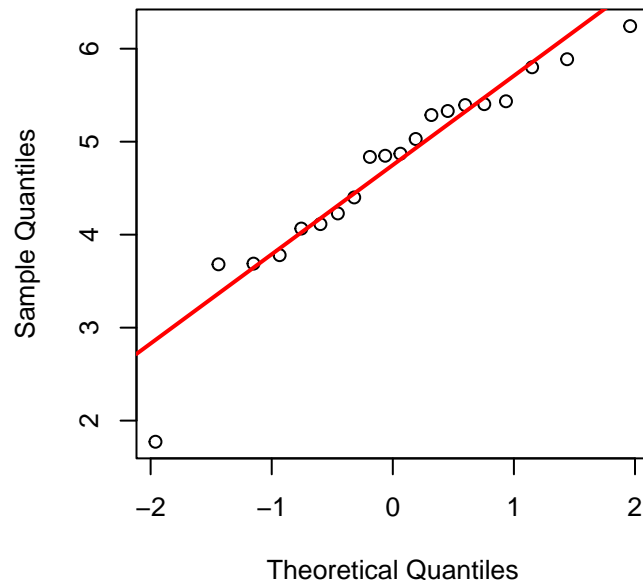
Check for normality of groups:

A – Shapiro–Wilk:  $p = 0.11$  , B – Shapiro–Wilk:  $p = 0.43$

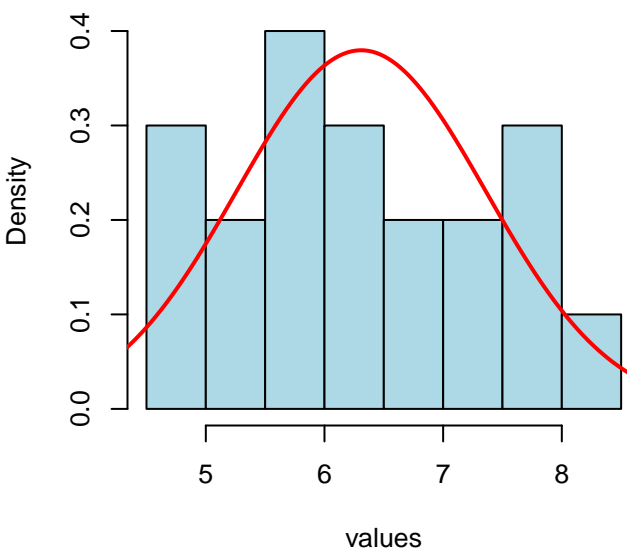
**Histogram – A**



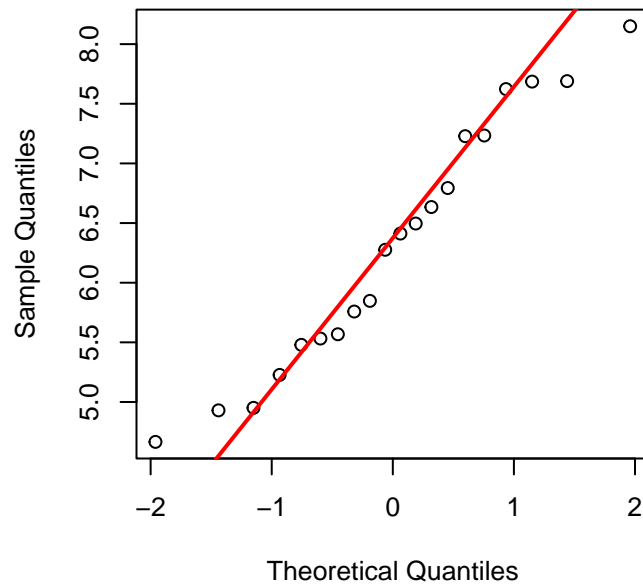
**Q-Q Plot – A**



**Histogram – B**



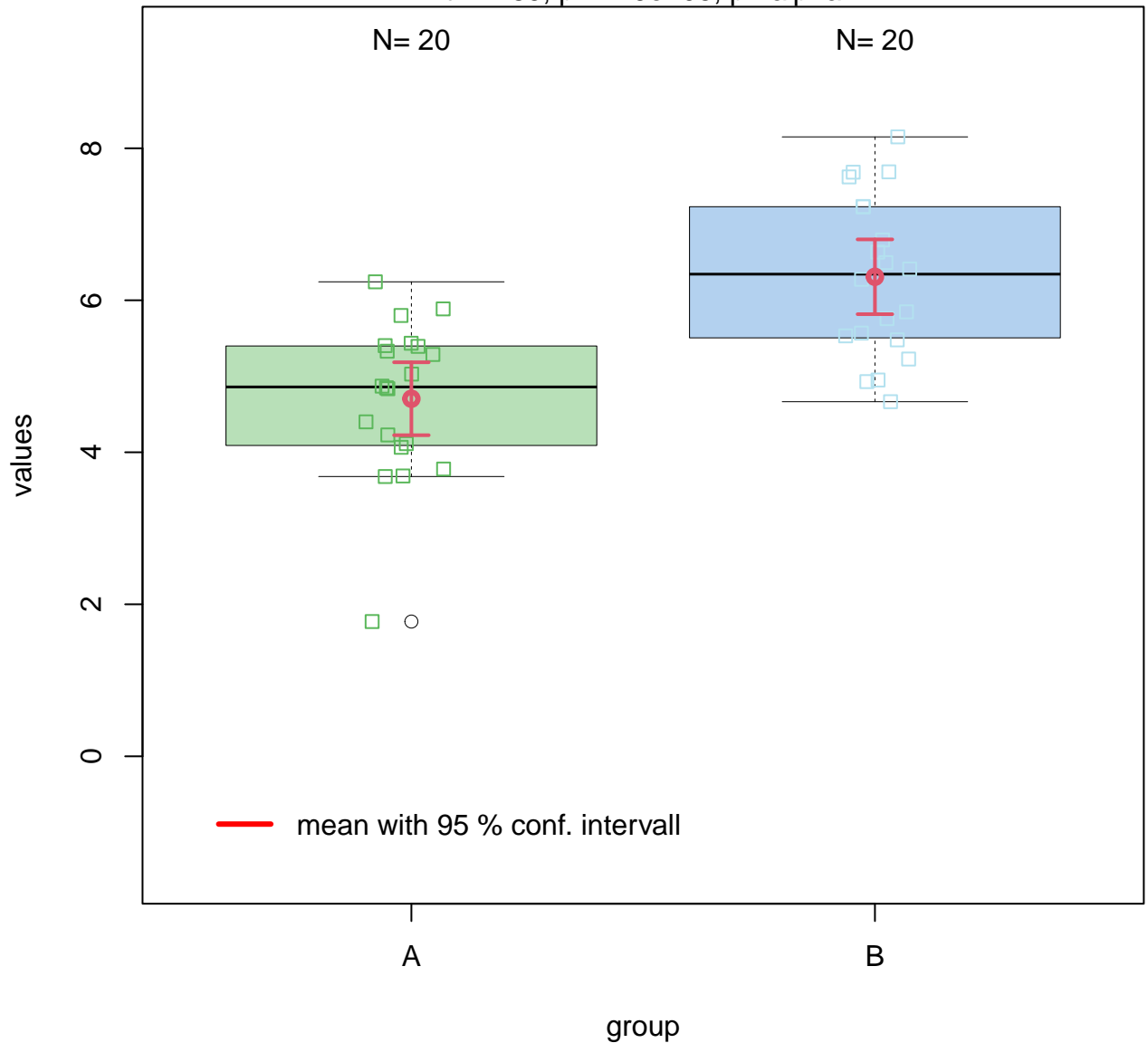
**Q-Q Plot – B**



Welch Two Sample t-test,  $\alpha = 0.05$

Null hypothesis: population mean values of group "A" equals population mean values of group

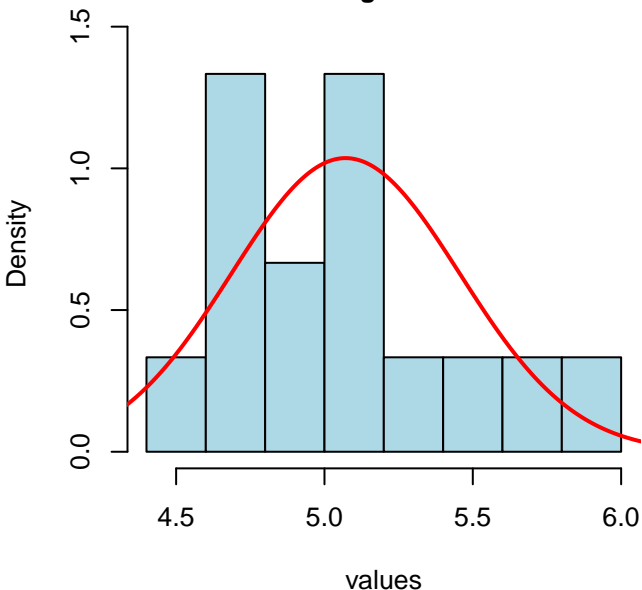
$t = -4.89$ ,  $p = 1.9e-05$ ,  $p < \alpha$



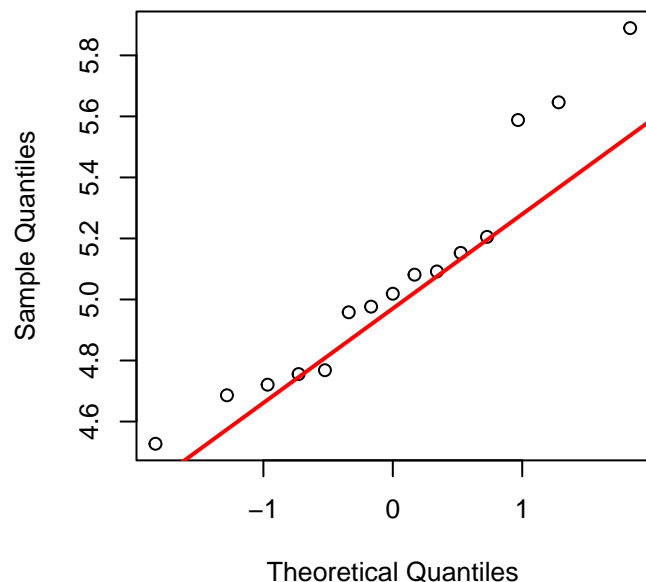
Check for normality of groups:

A – Shapiro–Wilk:  $p = 0.26$  , B – Shapiro–Wilk:  $p = 0.88$

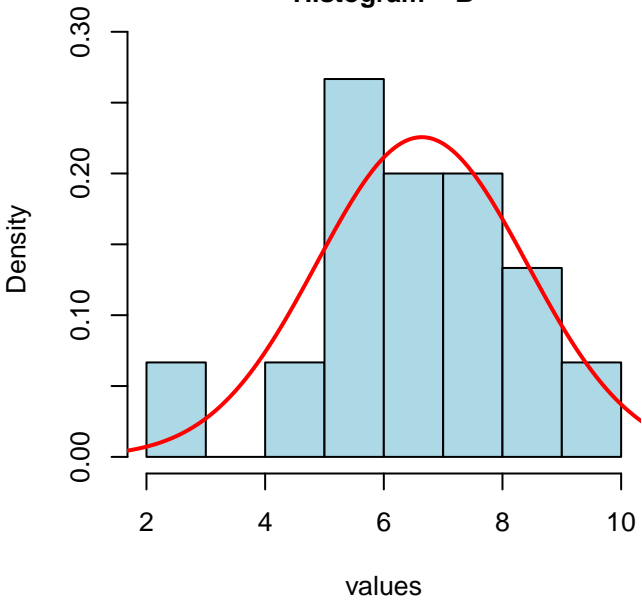
**Histogram – A**



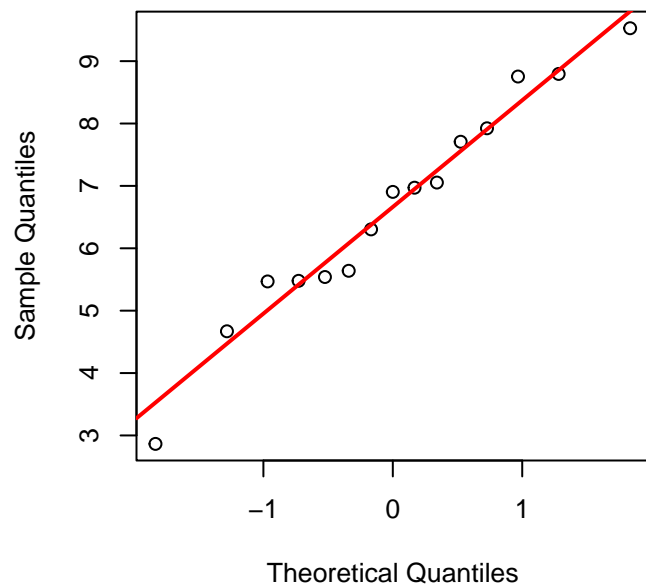
**Q-Q Plot – A**



**Histogram – B**



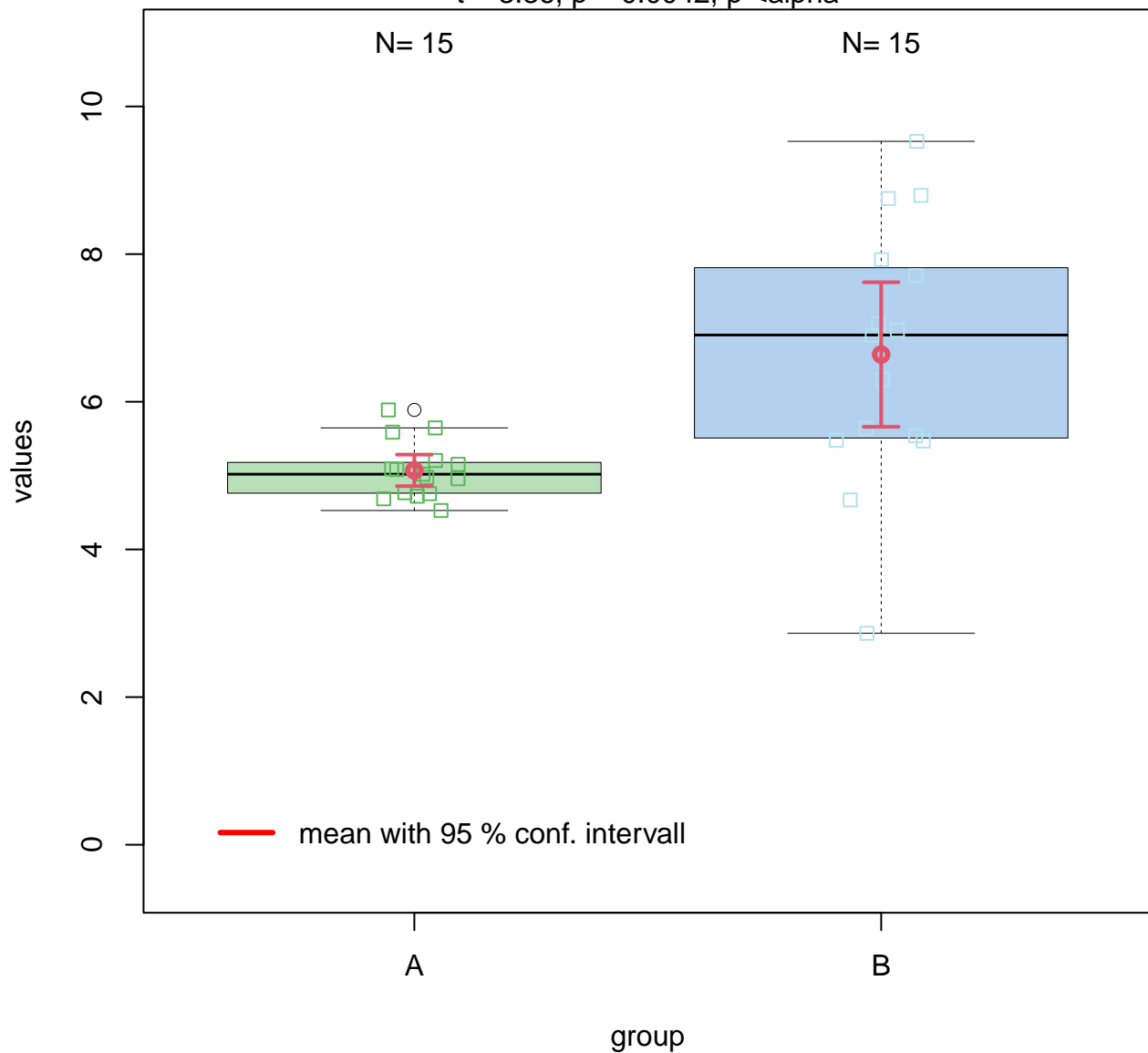
**Q-Q Plot – B**



Welch Two Sample t-test,  $\alpha = 0.05$

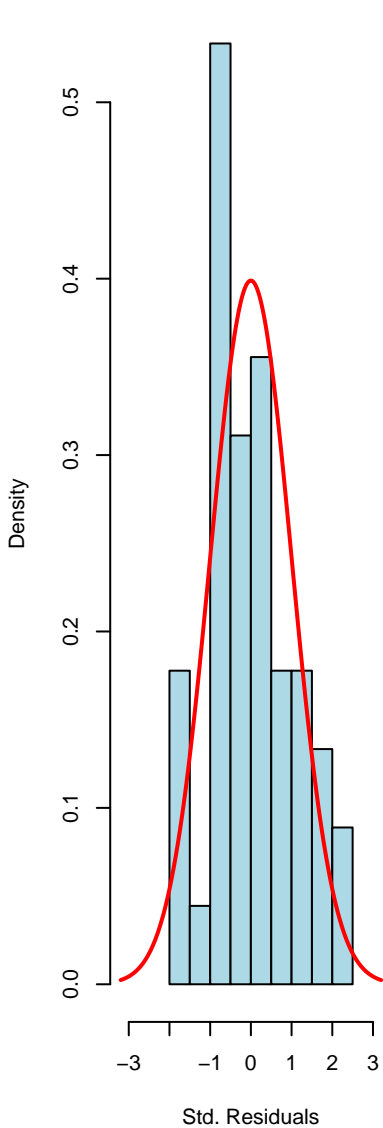
Null hypothesis: population mean values of group "A" equals population mean values of group

$t = -3.36$ ,  $p = 0.0042$ ,  $p < \alpha$

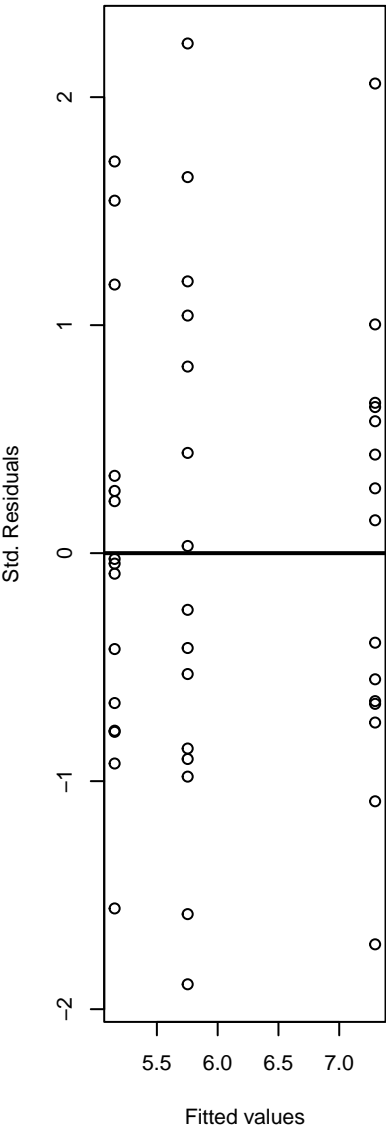


Shapiro p = 0.543 | Anderson–Darling p = 0.541  
Levene–Brown–Forsythe p = 0.457 | Bartlett p = 0.567

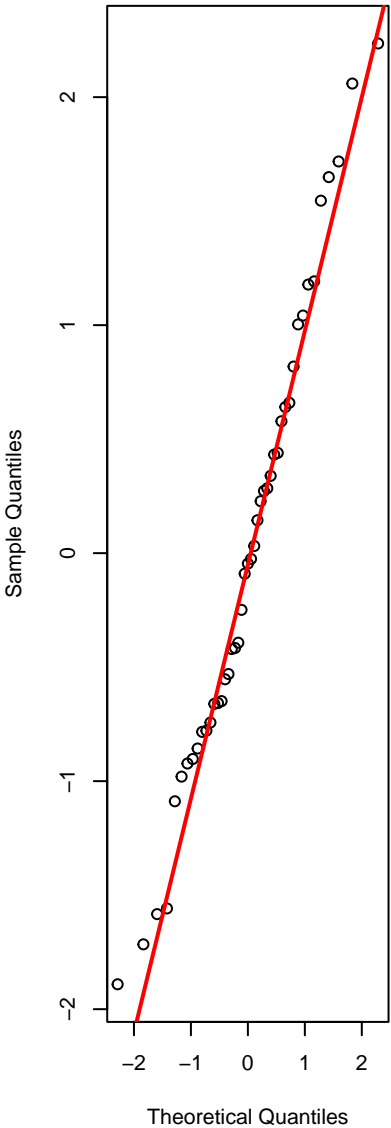
Hist. of Std. Res.



Std. Res. vs. Fitted

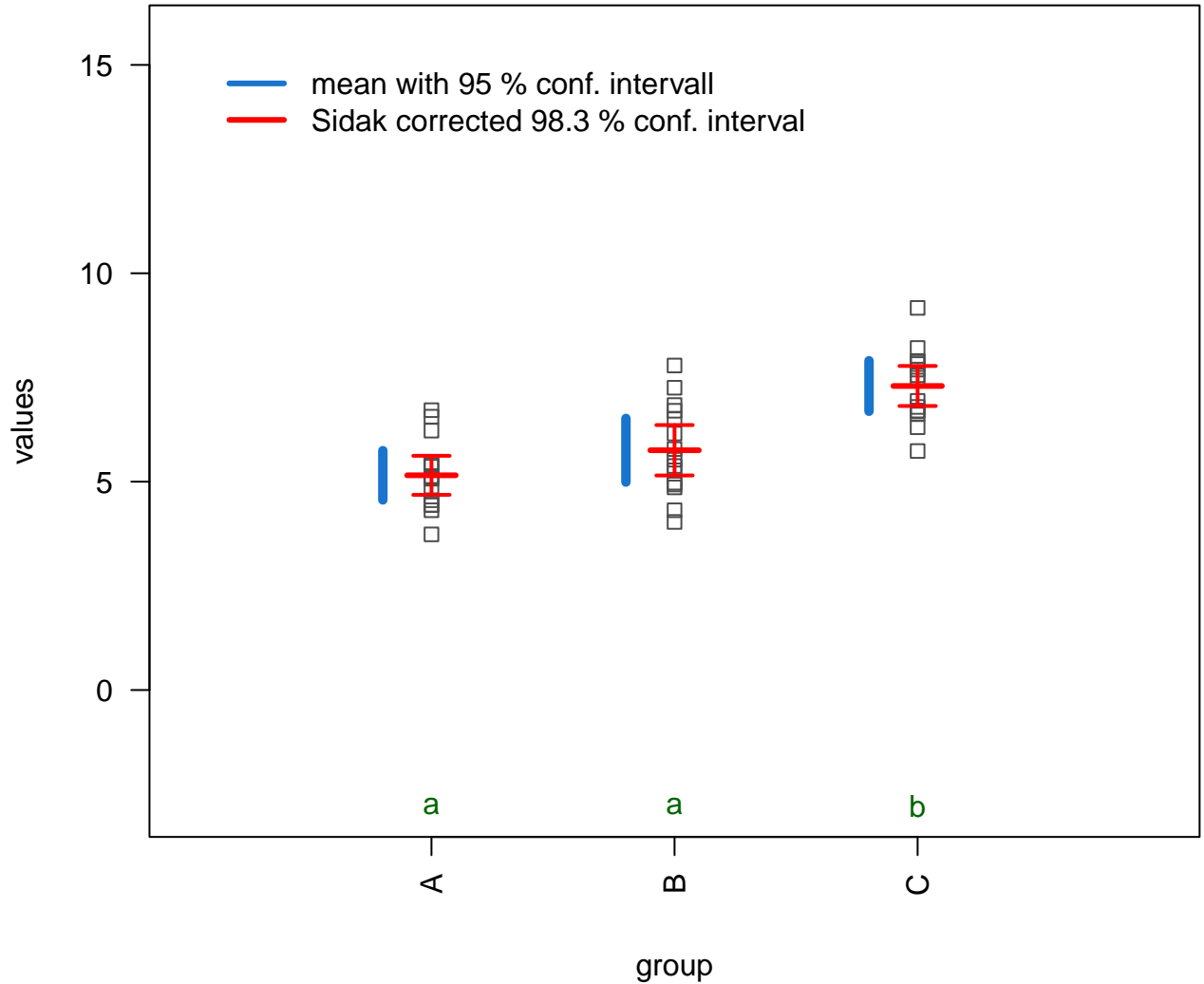


Normal Q–Q Plot



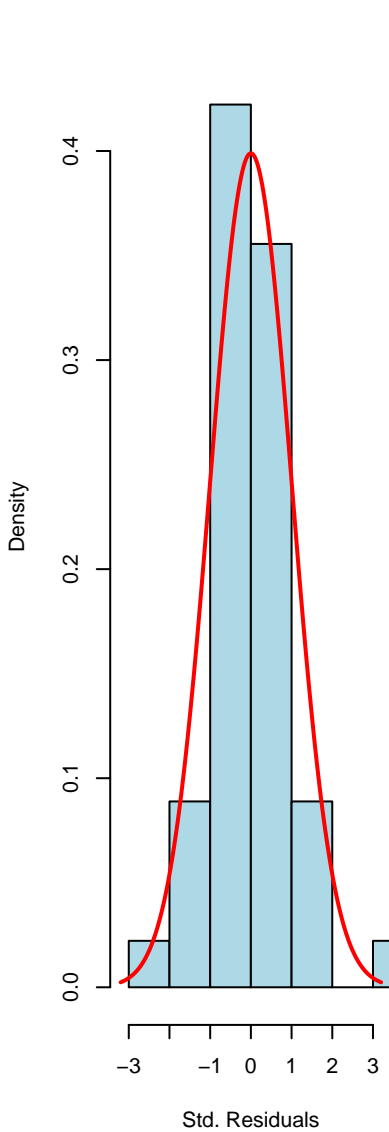
# Fisher's one-way ANOVA

$F = 20.67$ ,  $p = 5.6e-07$

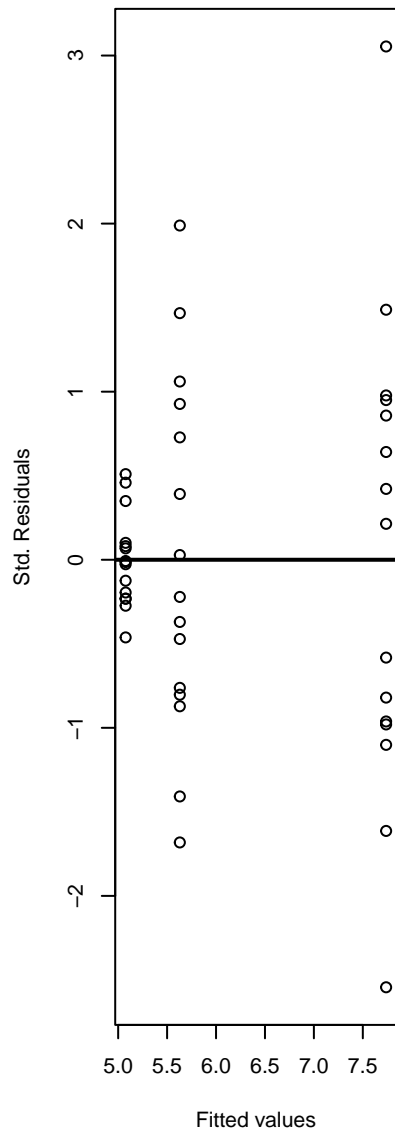


Shapiro p = 0.667 | Anderson–Darling p = 0.585  
Levene–Brown–Forsythe p = 0.000446 | Bartlett p = 1.67e-06

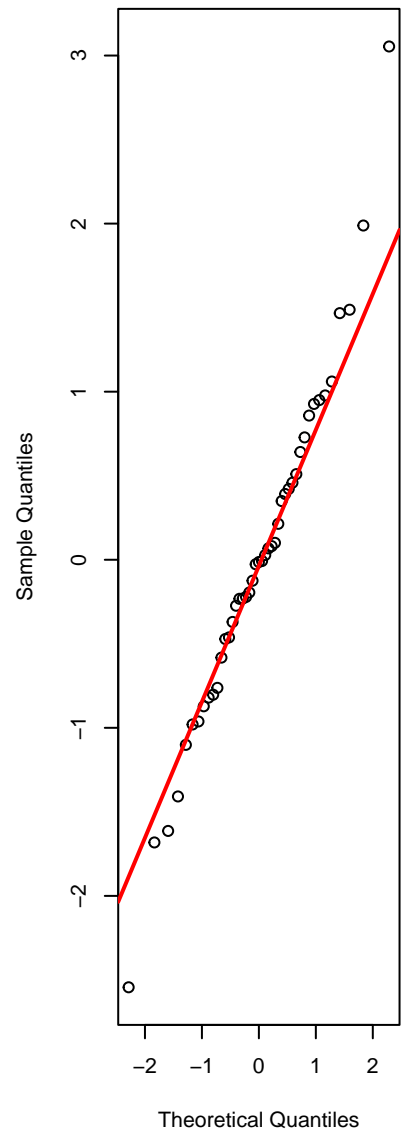
**Hist. of Std. Res.**



**Std. Res. vs. Fitted**

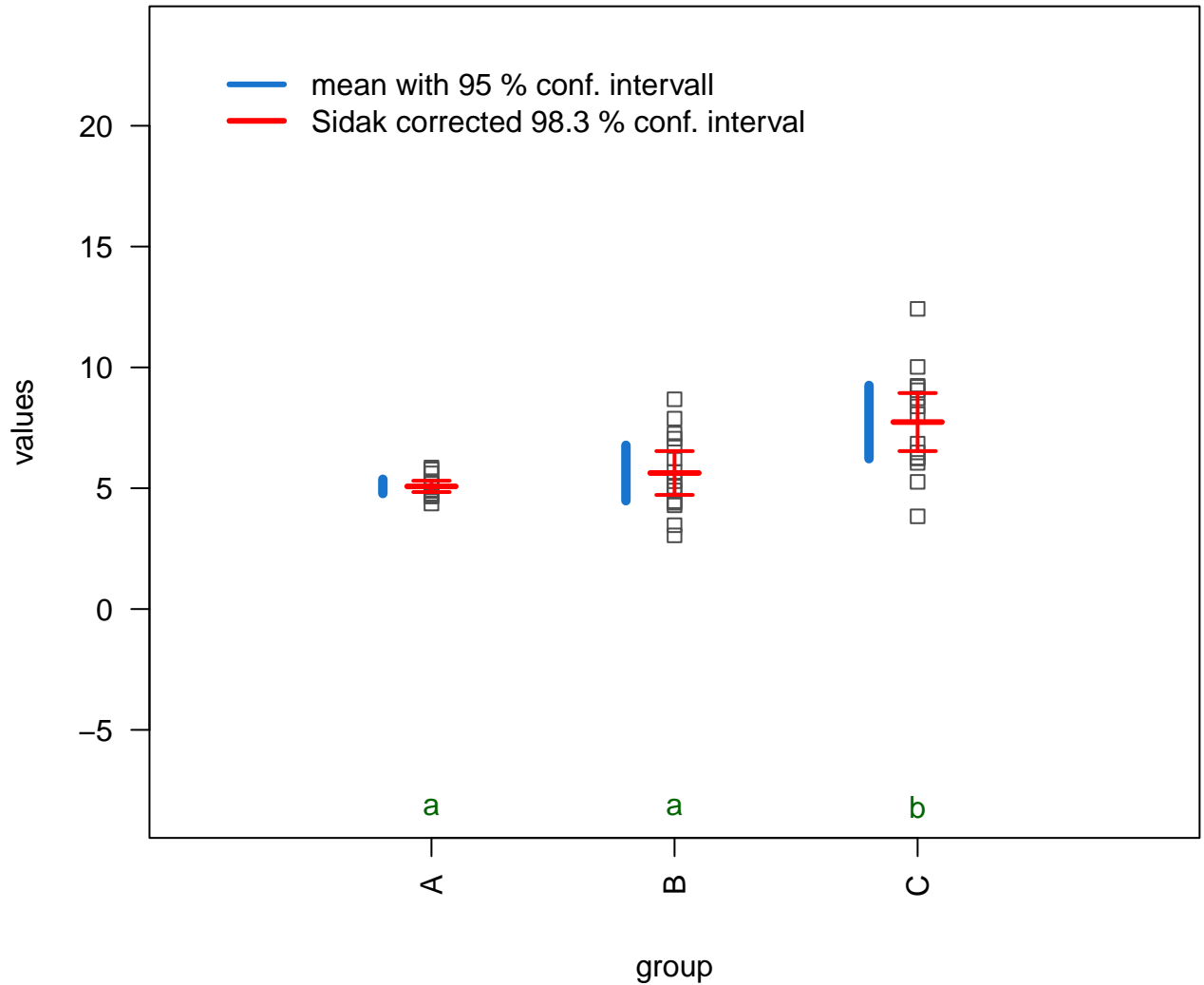


**Normal Q–Q Plot**



# Welch's heteroscedastic one-way ANOVA

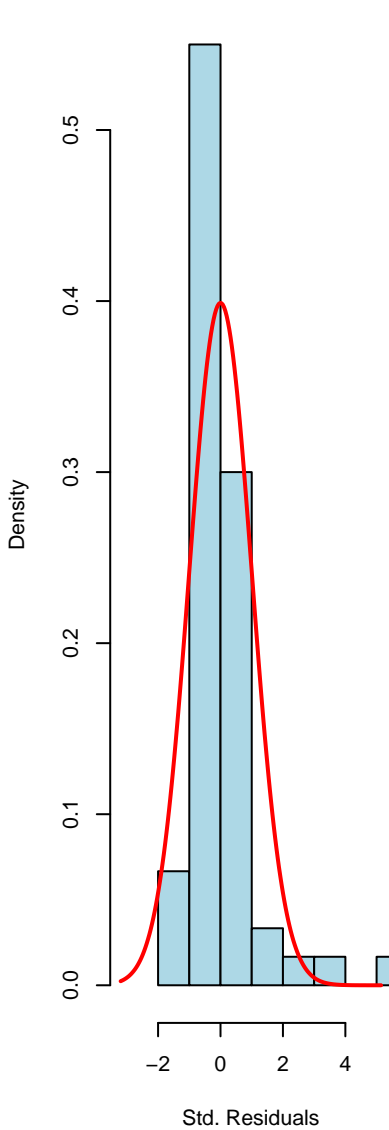
F = 11.09, p = 0.00055



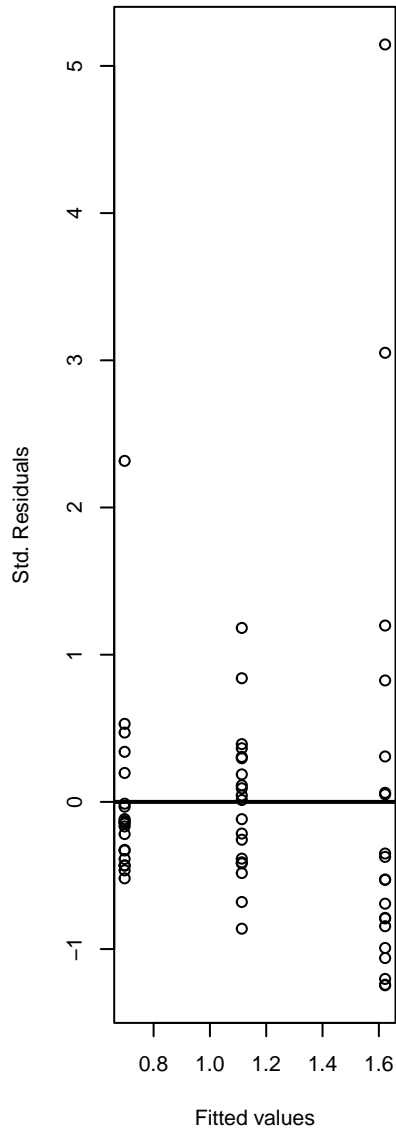


Shapiro  $p = 4.8\text{e-}09$  | Anderson–Darling  $p = 1.31\text{e-}09$   
Levene–Brown–Forsythe  $p = 0.0607$  | Bartlett  $p = 4.59\text{e-}07$

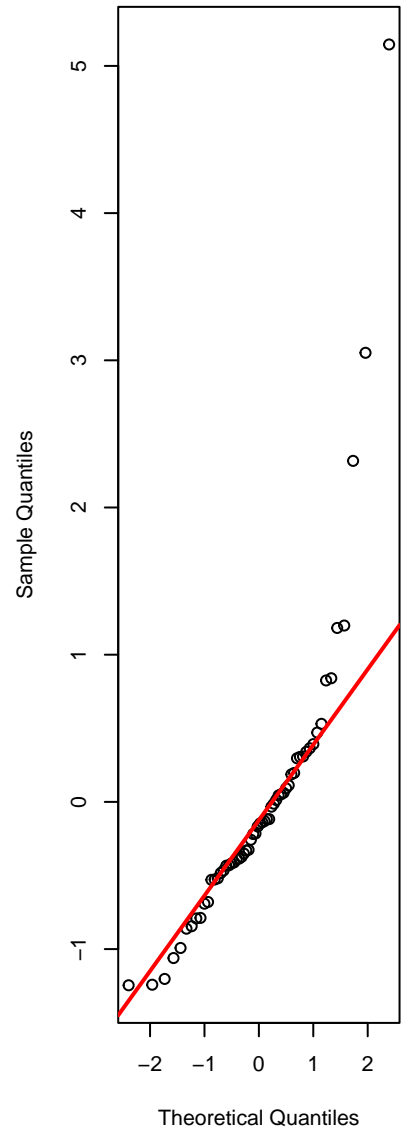
Hist. of Std. Res.



Std. Res. vs. Fitted



Normal Q–Q Plot



# Kruskal-Wallis rank sum test

$H = 7.27, p = 0.0264$

N = 20

20

20

values

8

6

4

2

0

ab

a

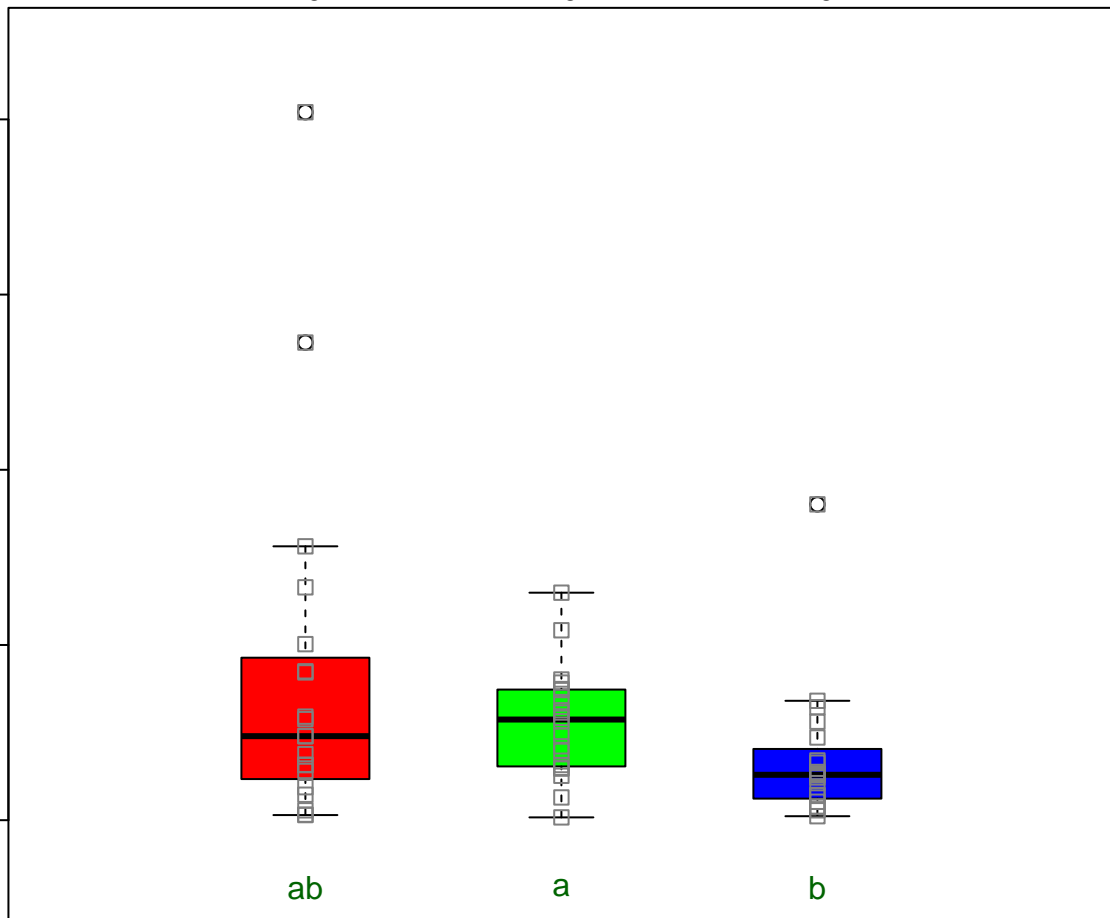
b

A

B

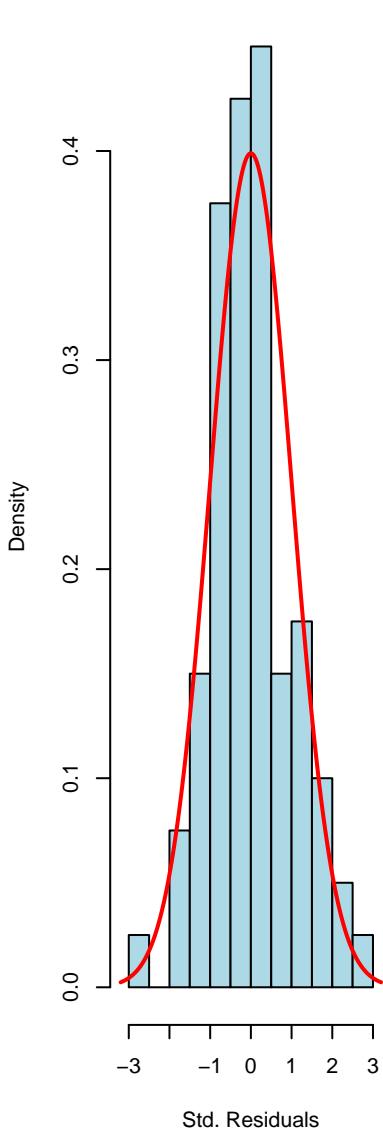
C

group

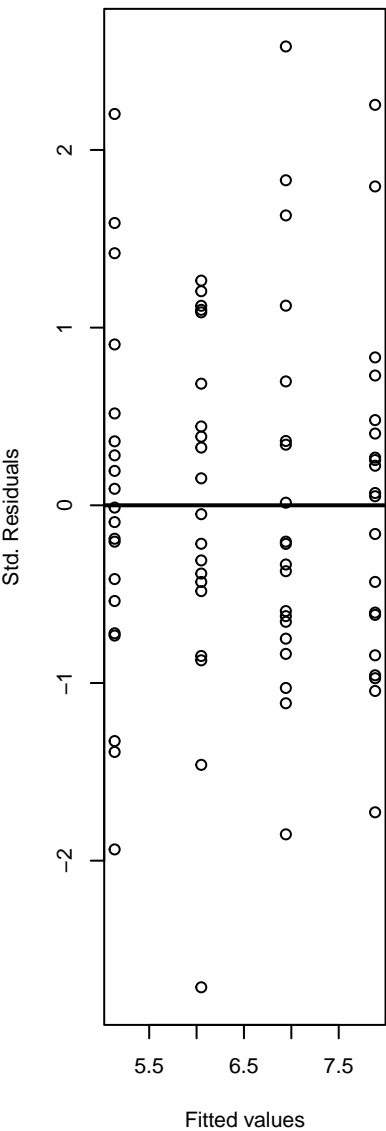


Shapiro p = 0.726 | Anderson–Darling p = 0.43  
Levene–Brown–Forsythe p = 0.981 | Bartlett p = 0.949

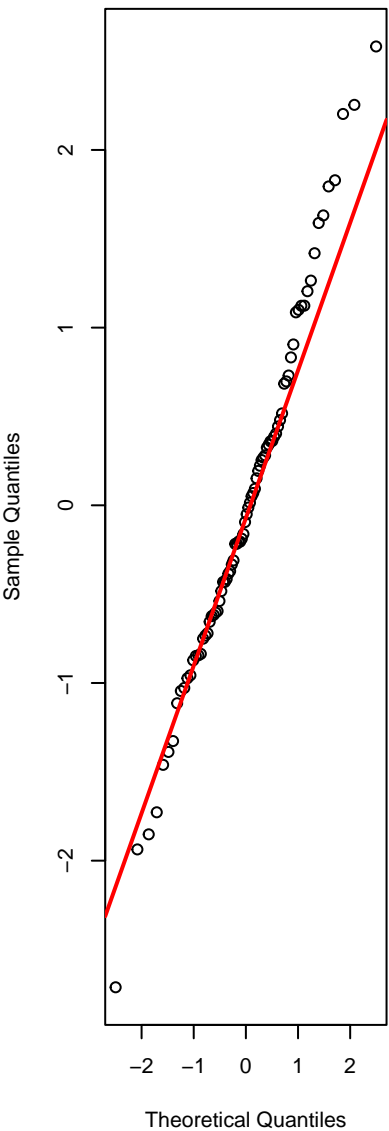
Hist. of Std. Res.



Std. Res. vs. Fitted

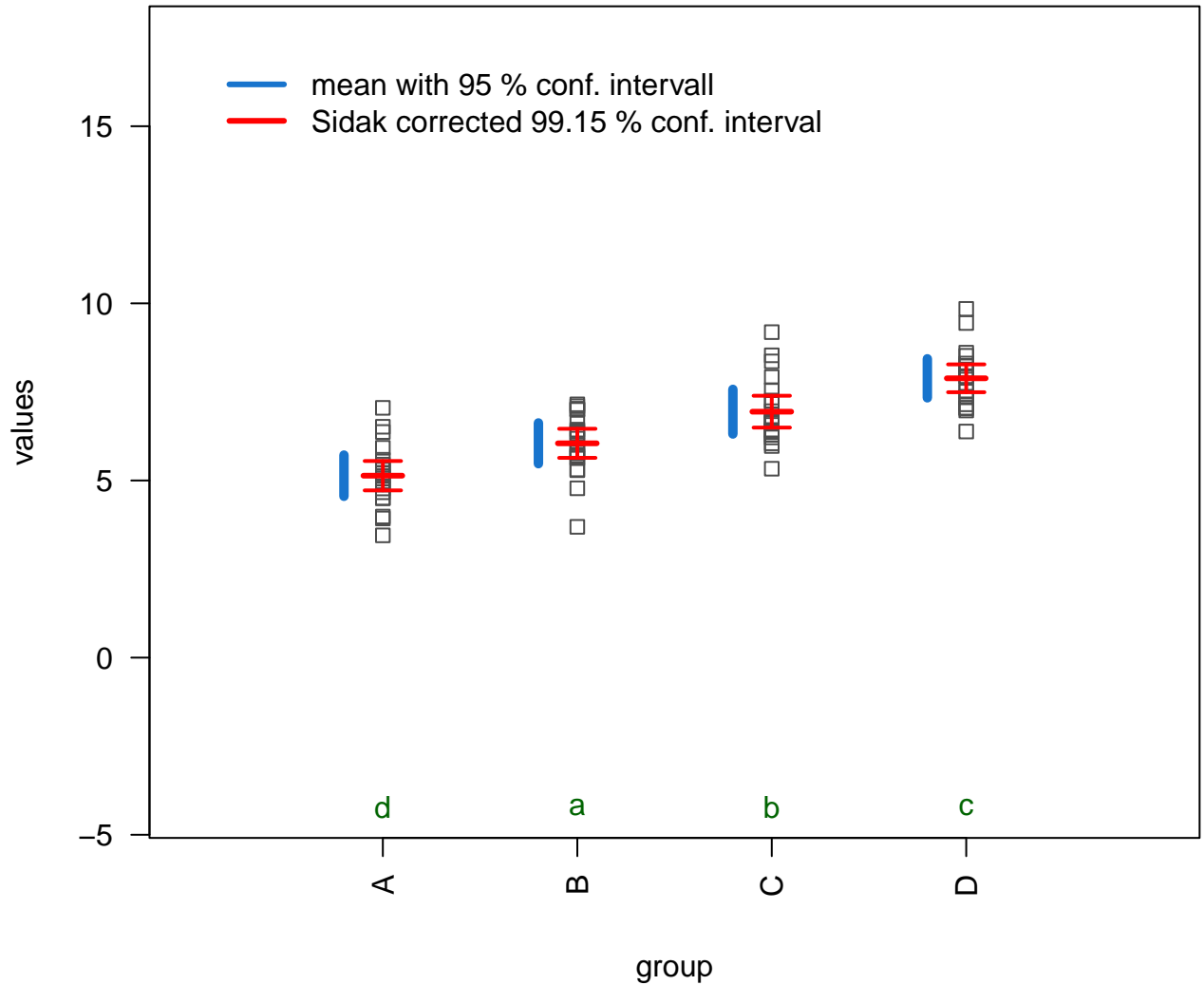


Normal Q–Q Plot



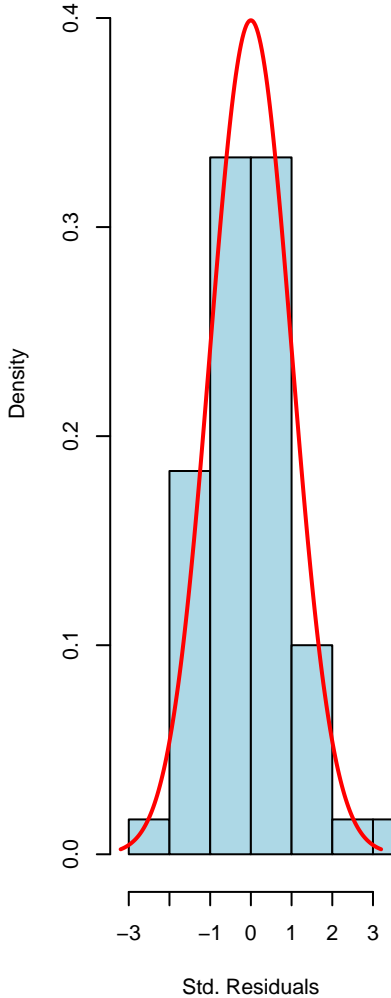
# Fisher's one-way ANOVA

$F = 35$ ,  $p = 2.6e-14$

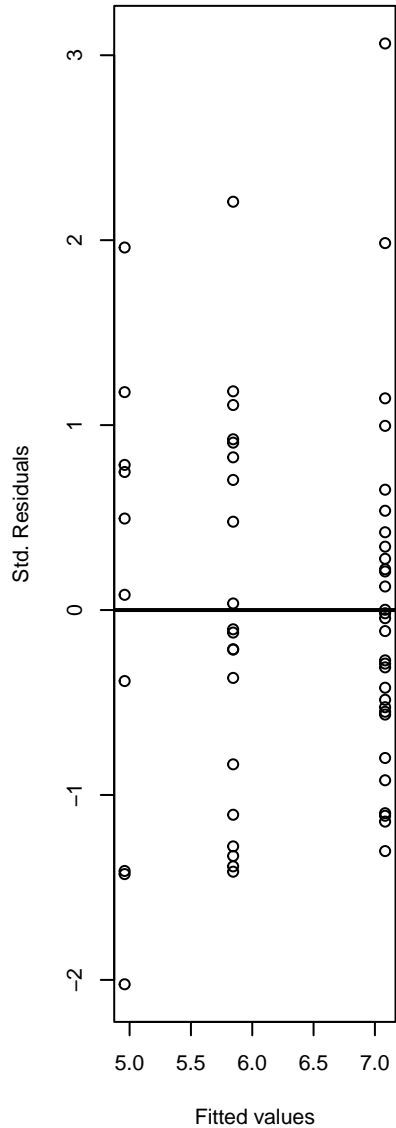


Shapiro p = 0.214 | Anderson-Darling p = 0.436  
Levene-Brown-Forsythe p = 0.338 | Bartlett p = 0.553

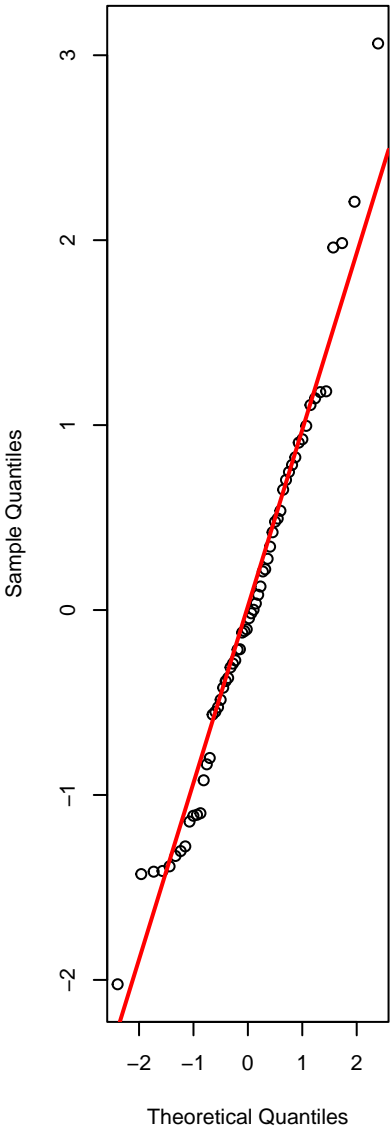
Hist. of Std. Res.



Std. Res. vs. Fitted

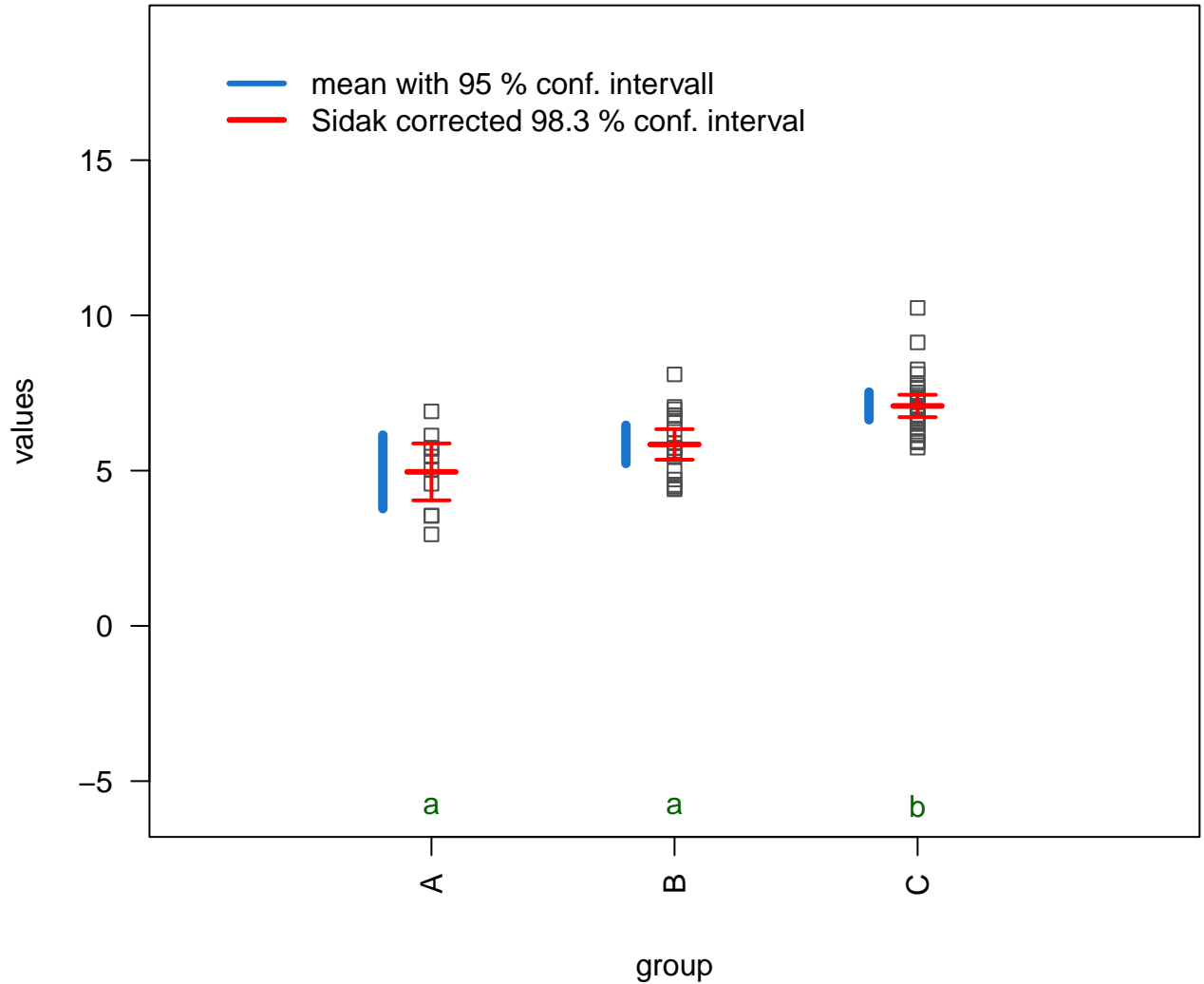


Normal Q-Q Plot



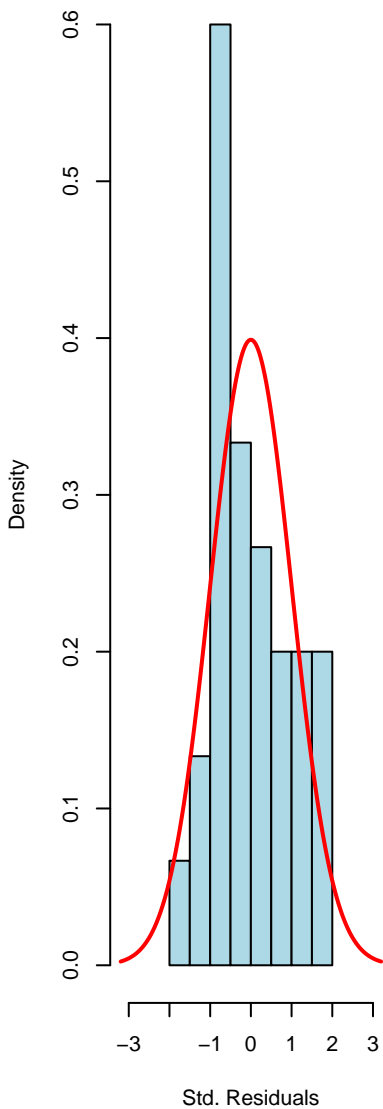
Fisher's one-way ANOVA

$F = 18.43$ ,  $p = 6.7e-07$

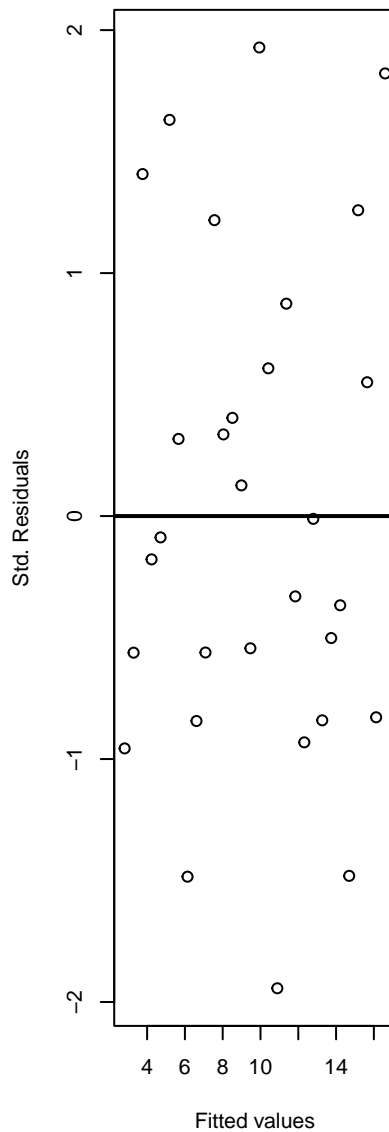


Shapiro p = 0.552 | Anderson-Darling p = 0.524

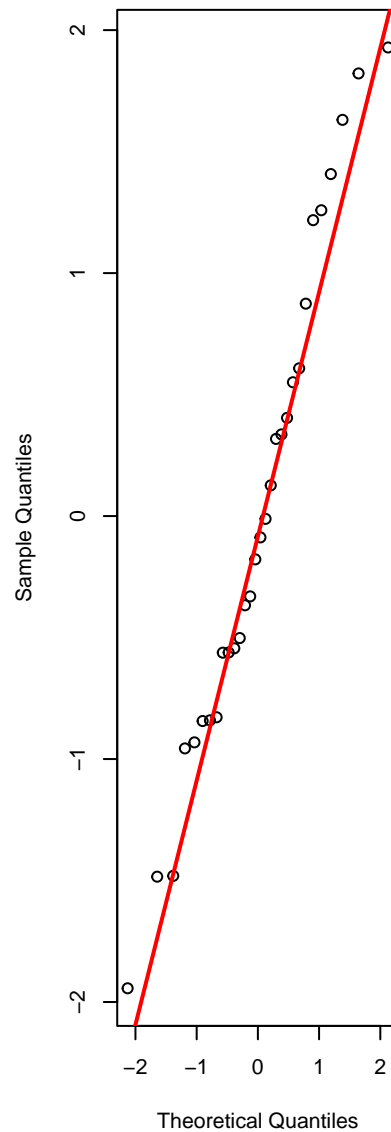
**Hist. of Std. Res.**



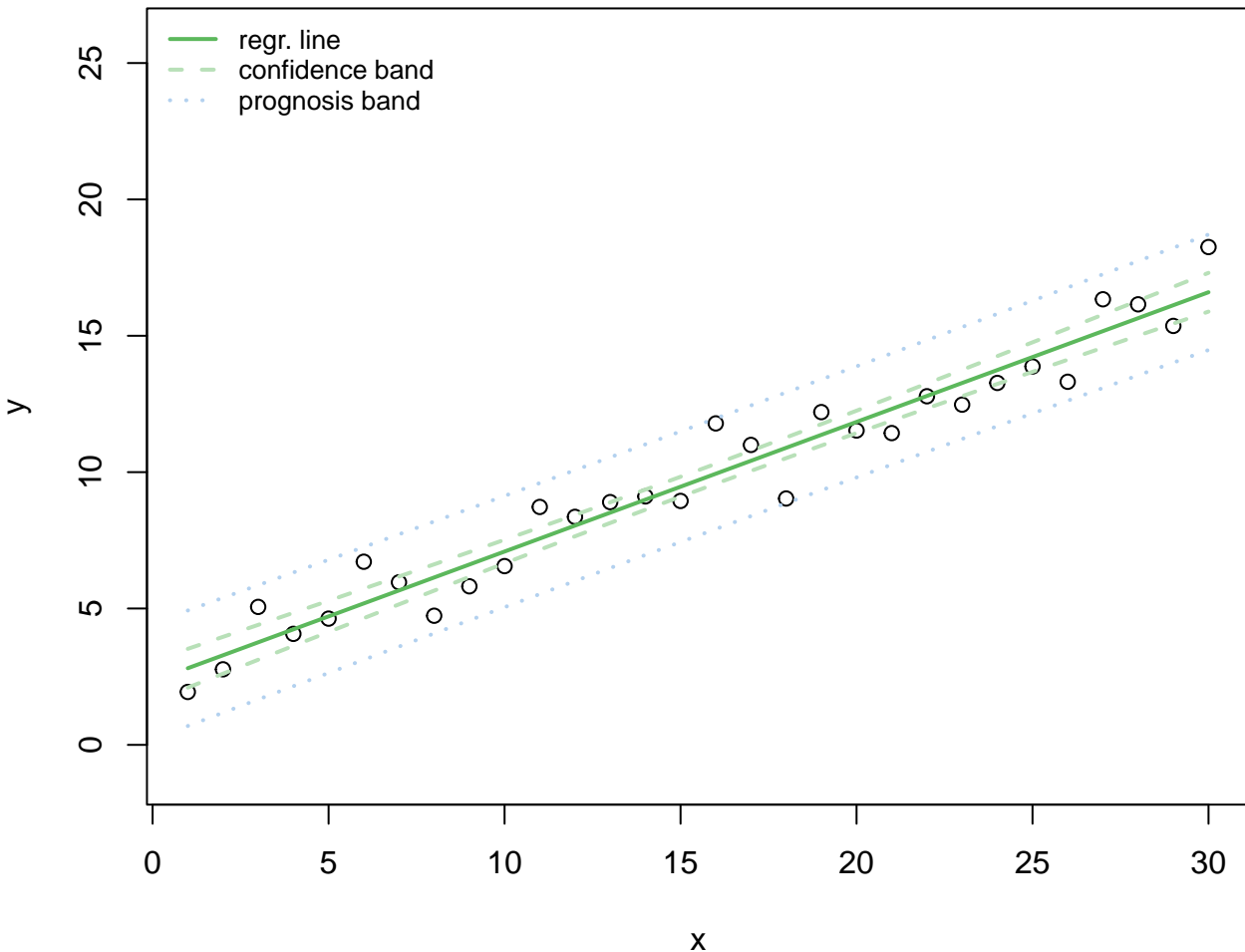
**Std. Res. vs. Fitted**



**Normal Q-Q Plot**



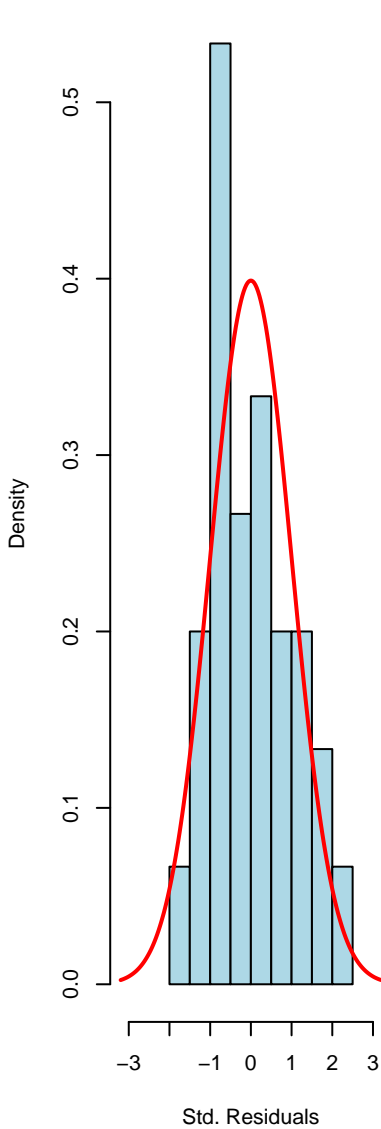
$y = a \cdot x + b$ , confidence level = 0.95 , adjusted  $R^2 = 0.95$   
slope  $a = 0.48$  , conf. interval [ 0.43 , 0.52 ] ,  $p = 8.5e-20$   
intercept  $b = 2.3$  , conf. interval [ 1.6 , 3.1 ] ,  $p = 6.3e-07$



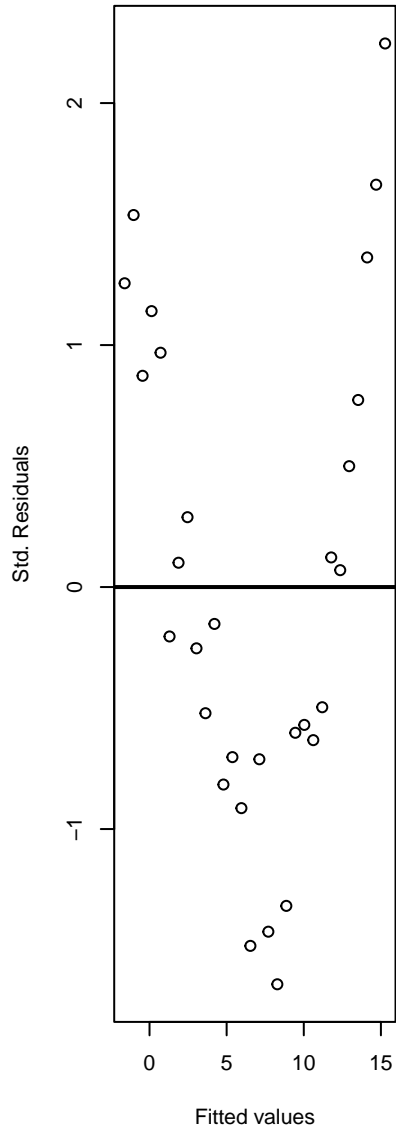


Shapiro p = 0.405 | Anderson–Darling p = 0.36

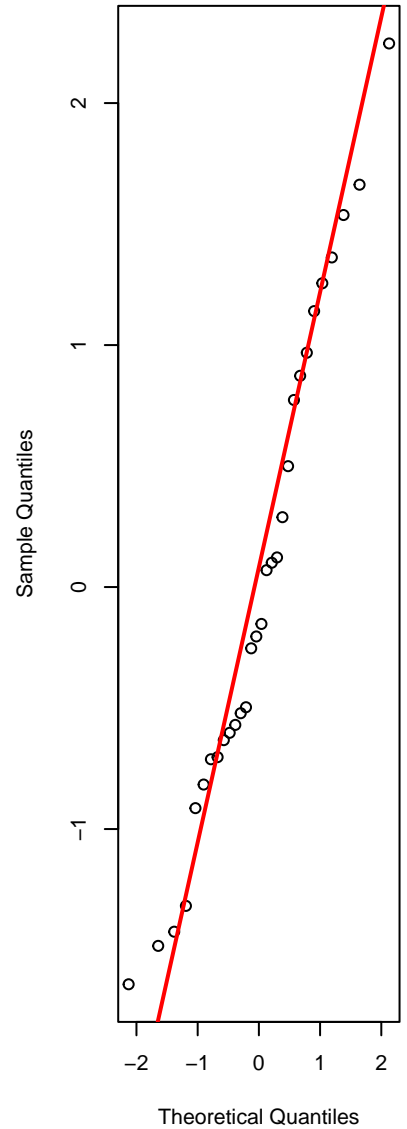
**Hist. of Std. Res.**



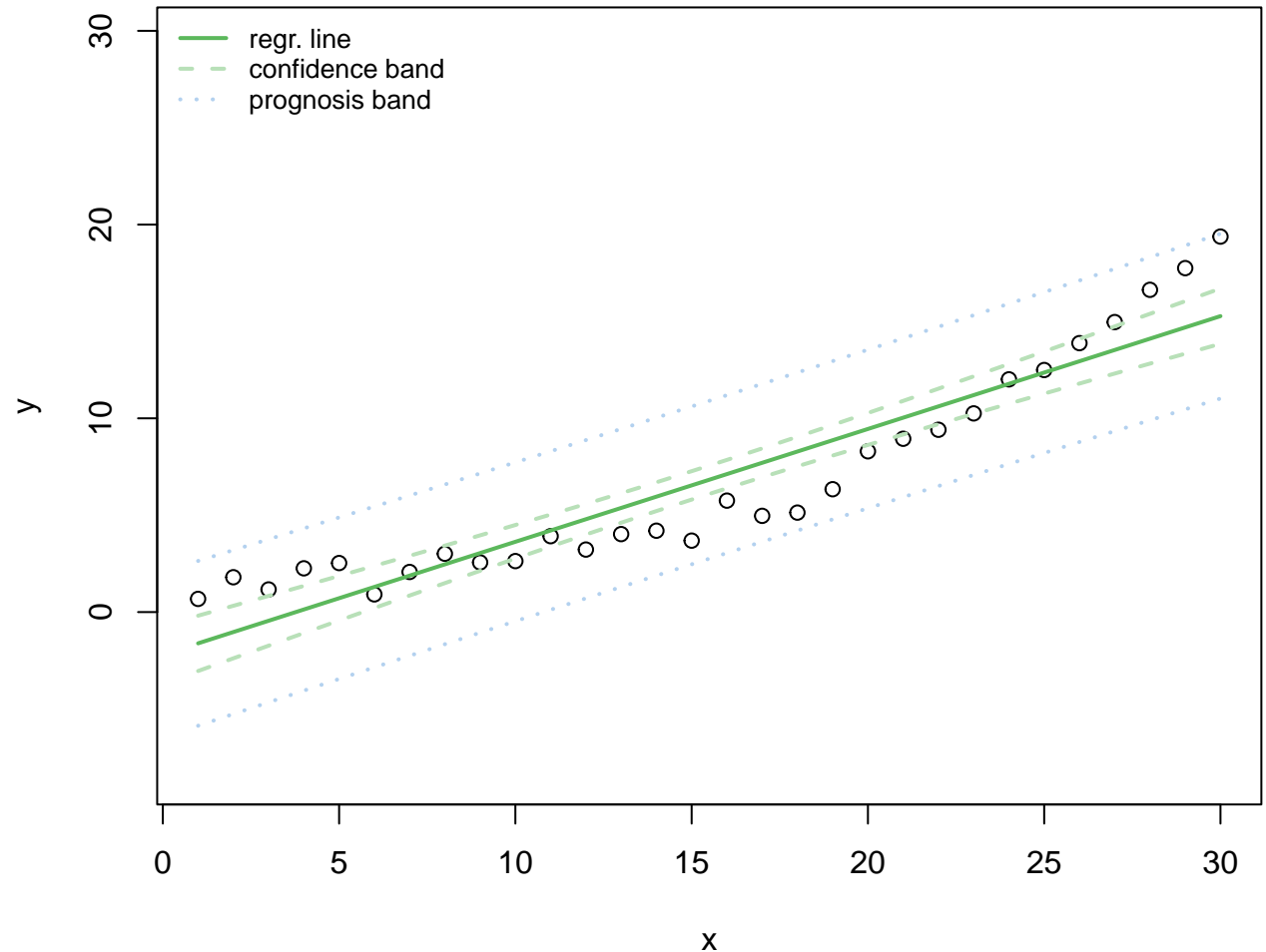
**Std. Res. vs. Fitted**



**Normal Q–Q Plot**

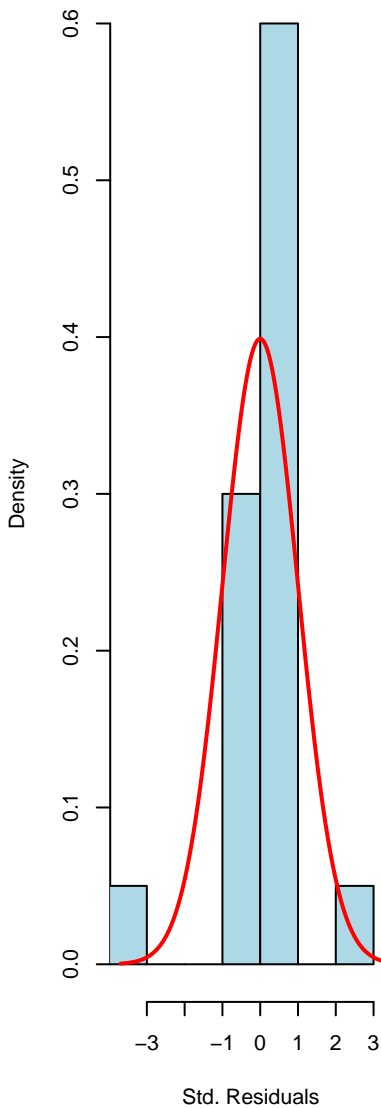


$y = a \cdot x + b$ , confidence level = 0.95 , adjusted  $R^2 = 0.87$   
slope  $a = 0.58$  , conf. interval [ 0.5 , 0.67 ] ,  $p = 3e-14$   
intercept  $b = -2.2$  , conf. interval [ -3.7 , -0.7 ] ,  $p = 0.0056$

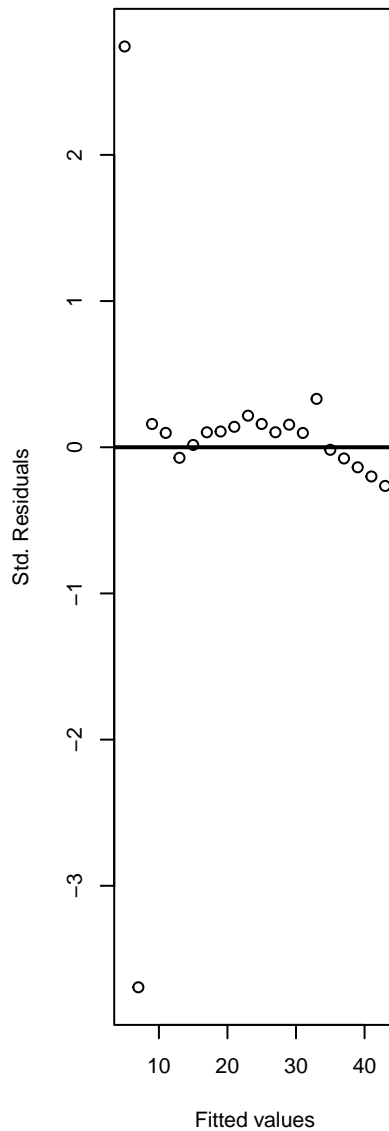


Shapiro p = 1.36e-06 | Anderson-Darling p = 3.9e-10

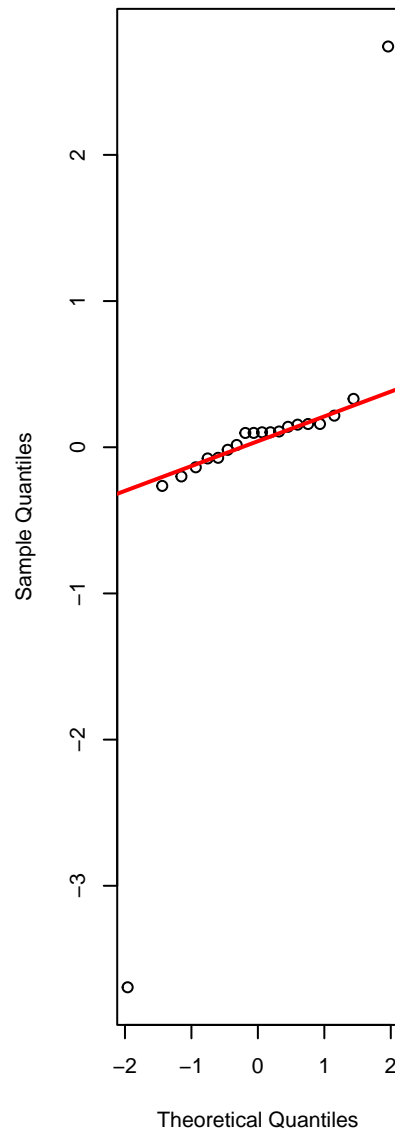
**Hist. of Std. Res.**



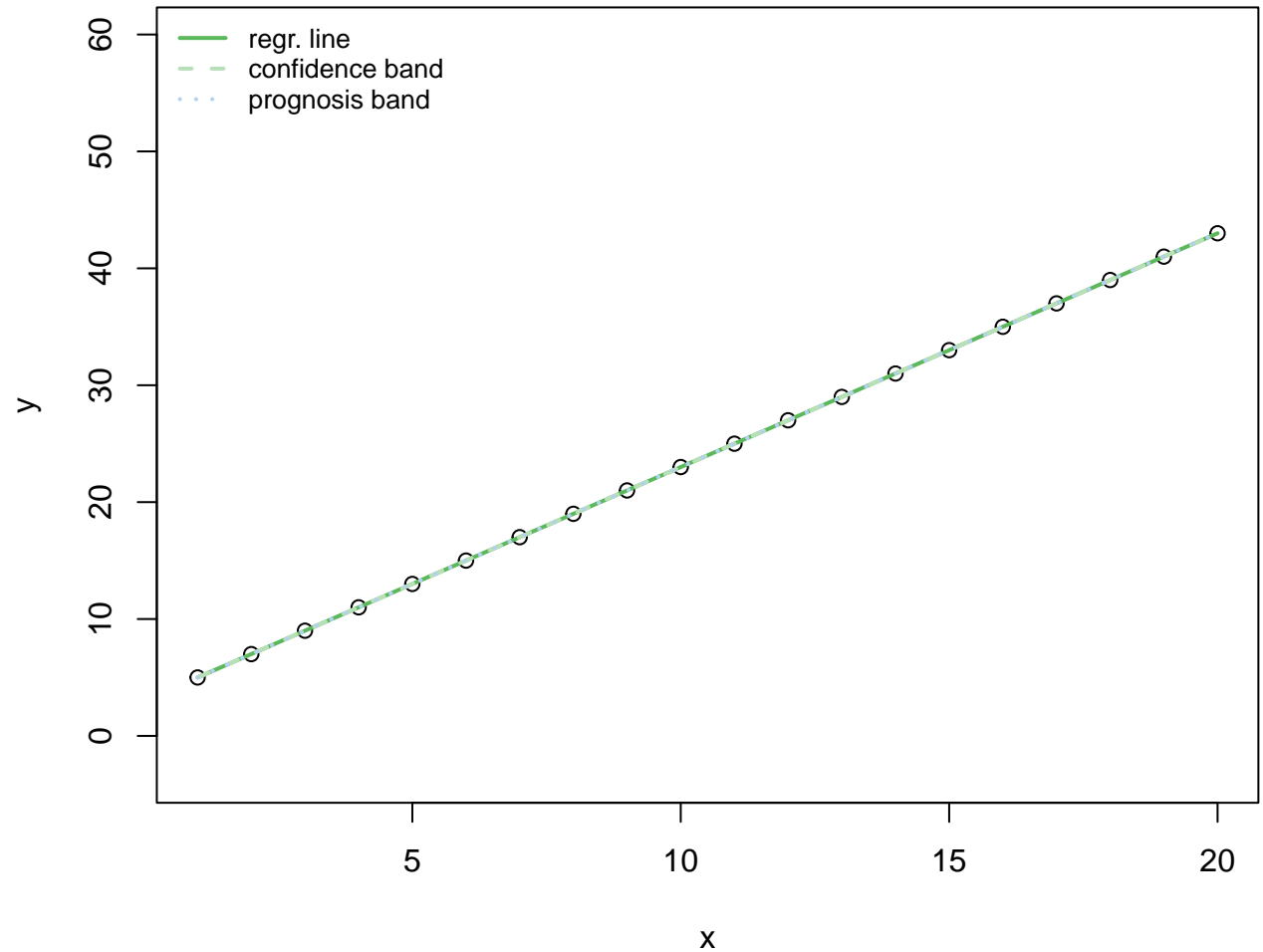
**Std. Res. vs. Fitted**



**Normal Q-Q Plot**

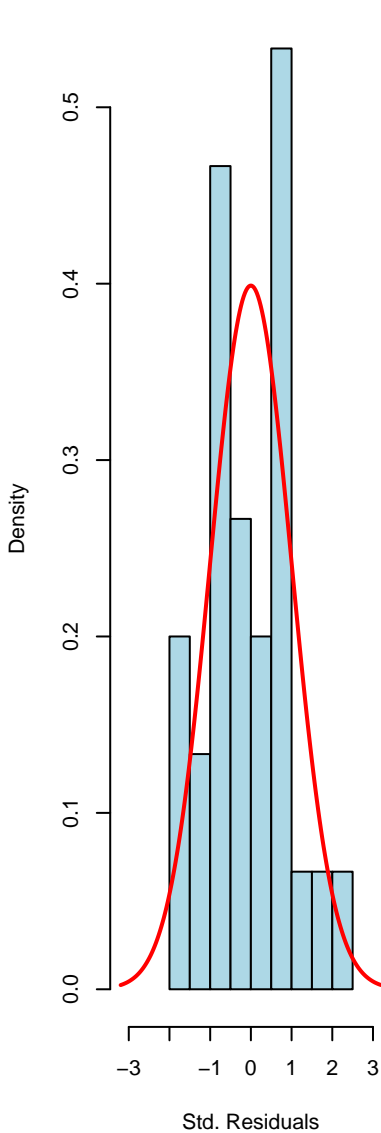


$y = a \cdot x + b$ , confidence level = 0.95 , adjusted  $R^2 = 1$   
slope  $a = 2$  , conf. interval [ 2 , 2 ] ,  $p = 3.5e-278$   
intercept  $b = 3$  , conf. interval [ 3 , 3 ] ,  $p = 6e-262$

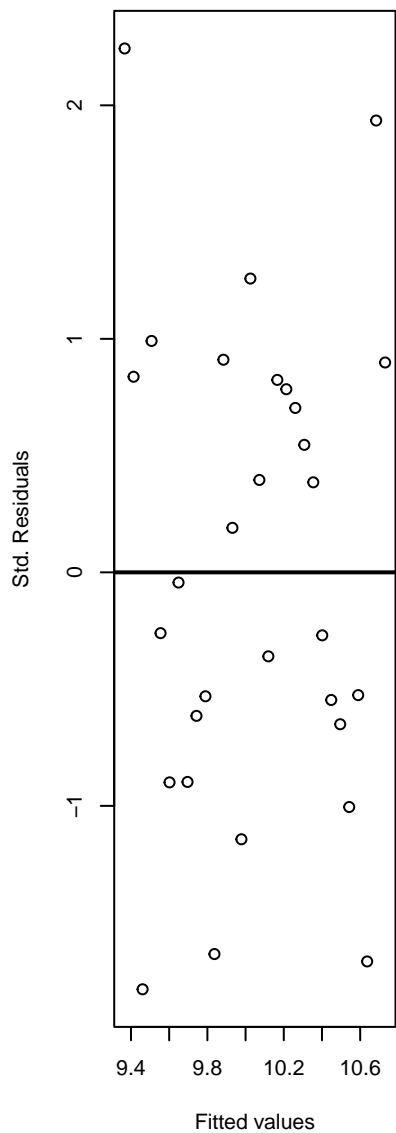


Shapiro p = 0.597 | Anderson–Darling p = 0.53

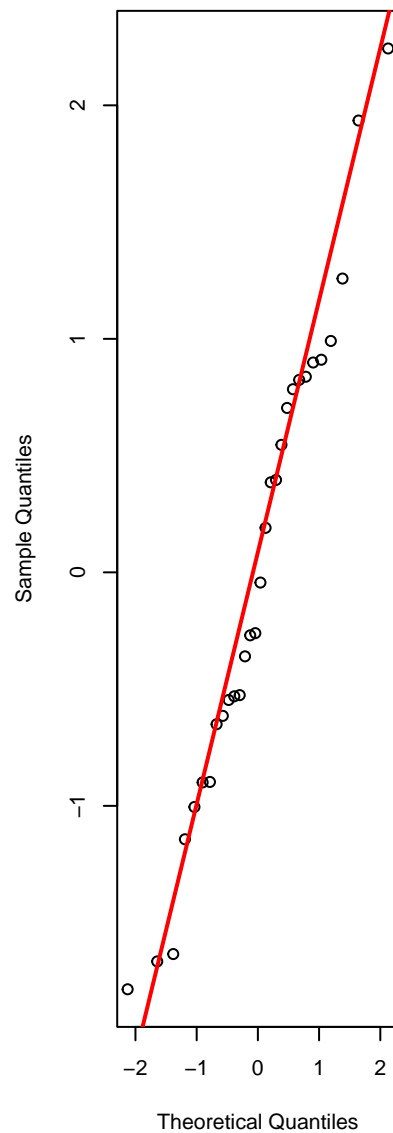
**Hist. of Std. Res.**



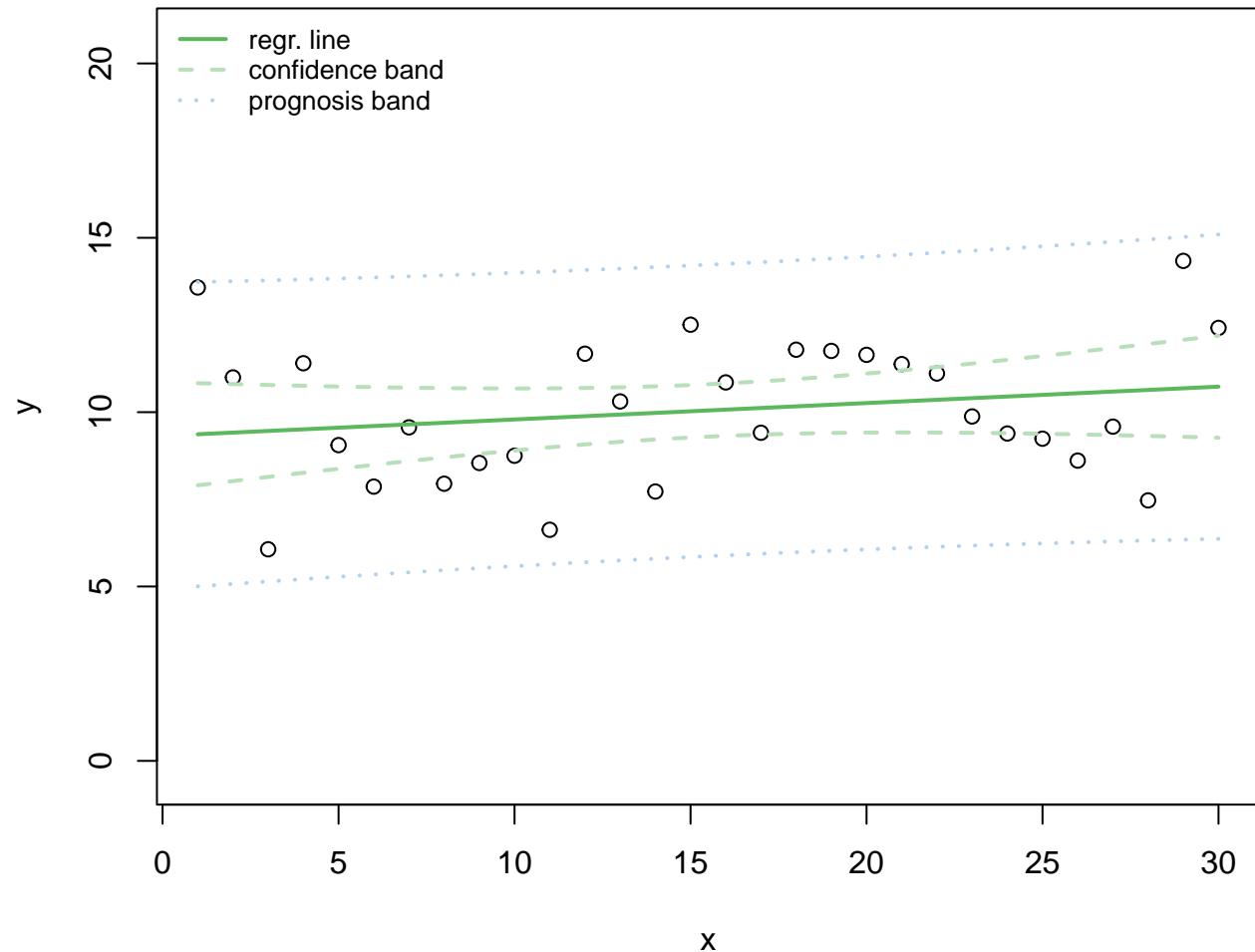
**Std. Res. vs. Fitted**



**Normal Q–Q Plot**

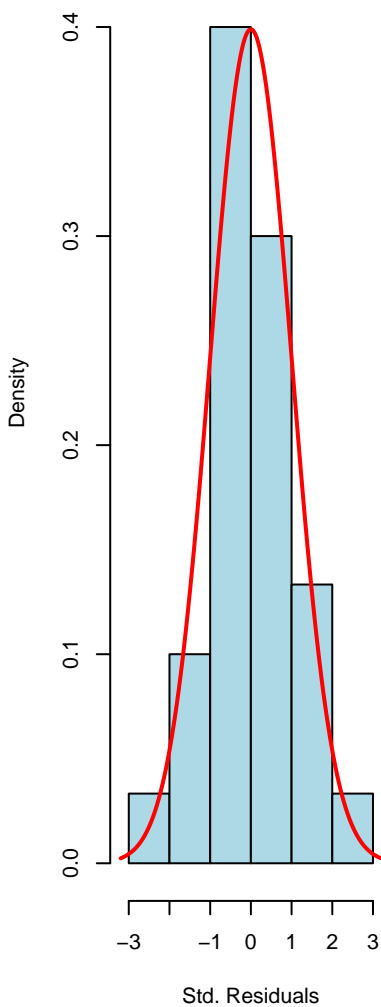


$y = a \cdot x + b$ , confidence level = 0.95 , adjusted  $R^2 = 0.008$   
slope  $a = 0.047$  , conf. interval  $[-0.04, 0.13]$  ,  $p = 0.28$   
intercept  $b = 9.3$  , conf. interval  $[7.8, 11]$  ,  $p = 6.8e-13$

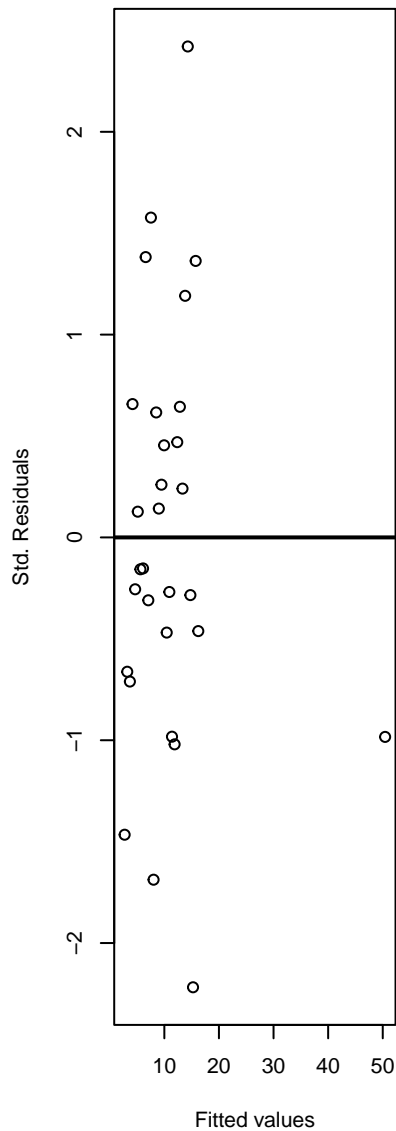


Shapiro p = 0.985 | Anderson-Darling p = 0.889

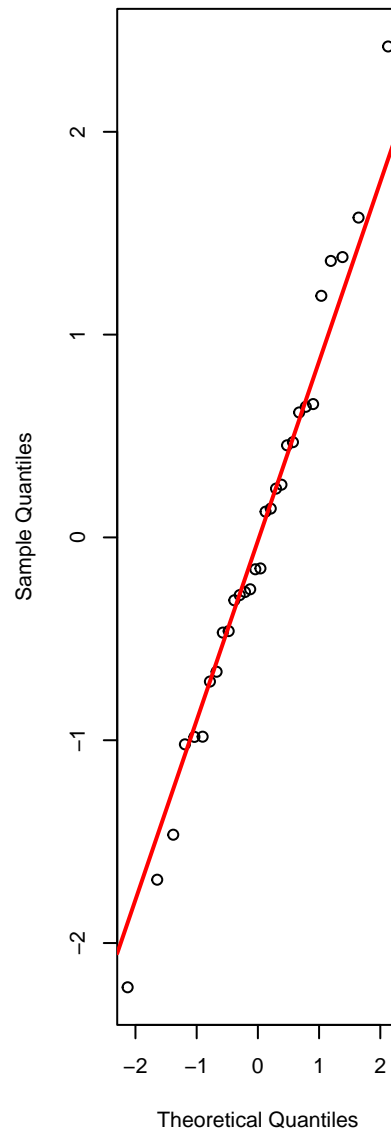
**Hist. of Std. Res.**



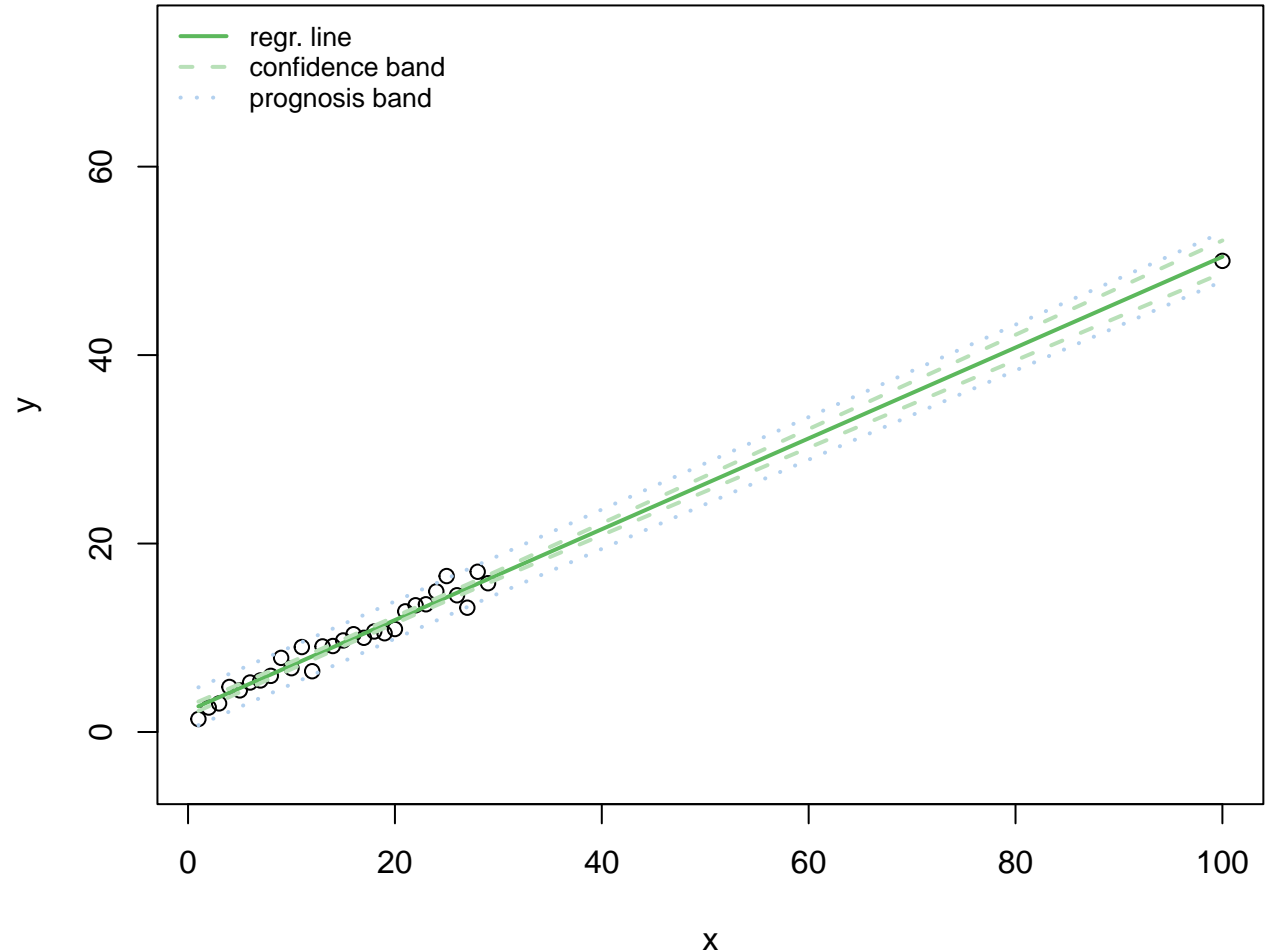
**Std. Res. vs. Fitted**



**Normal Q-Q Plot**

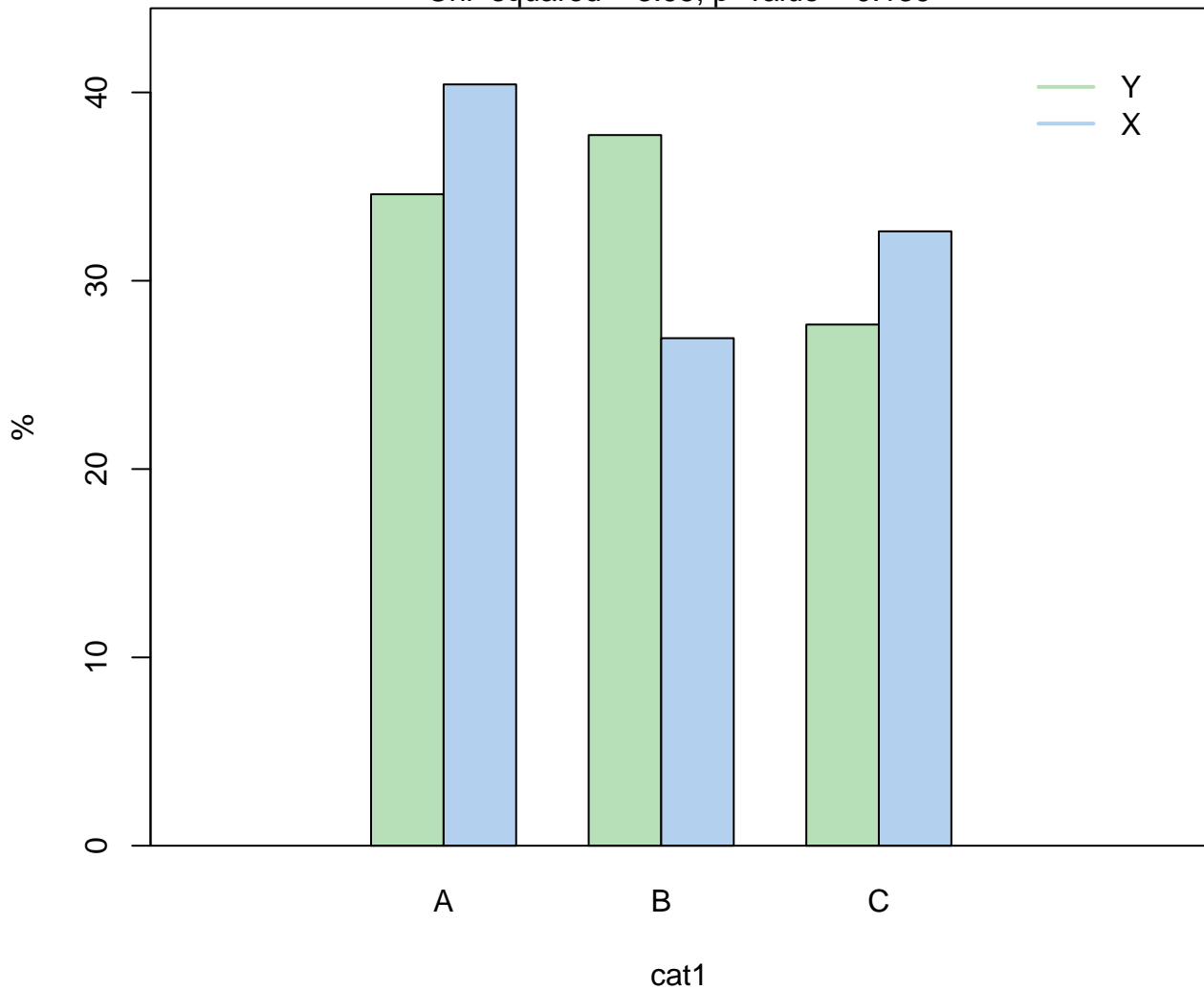


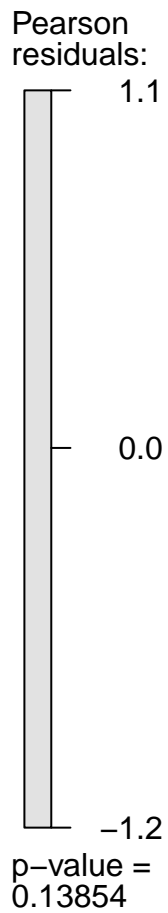
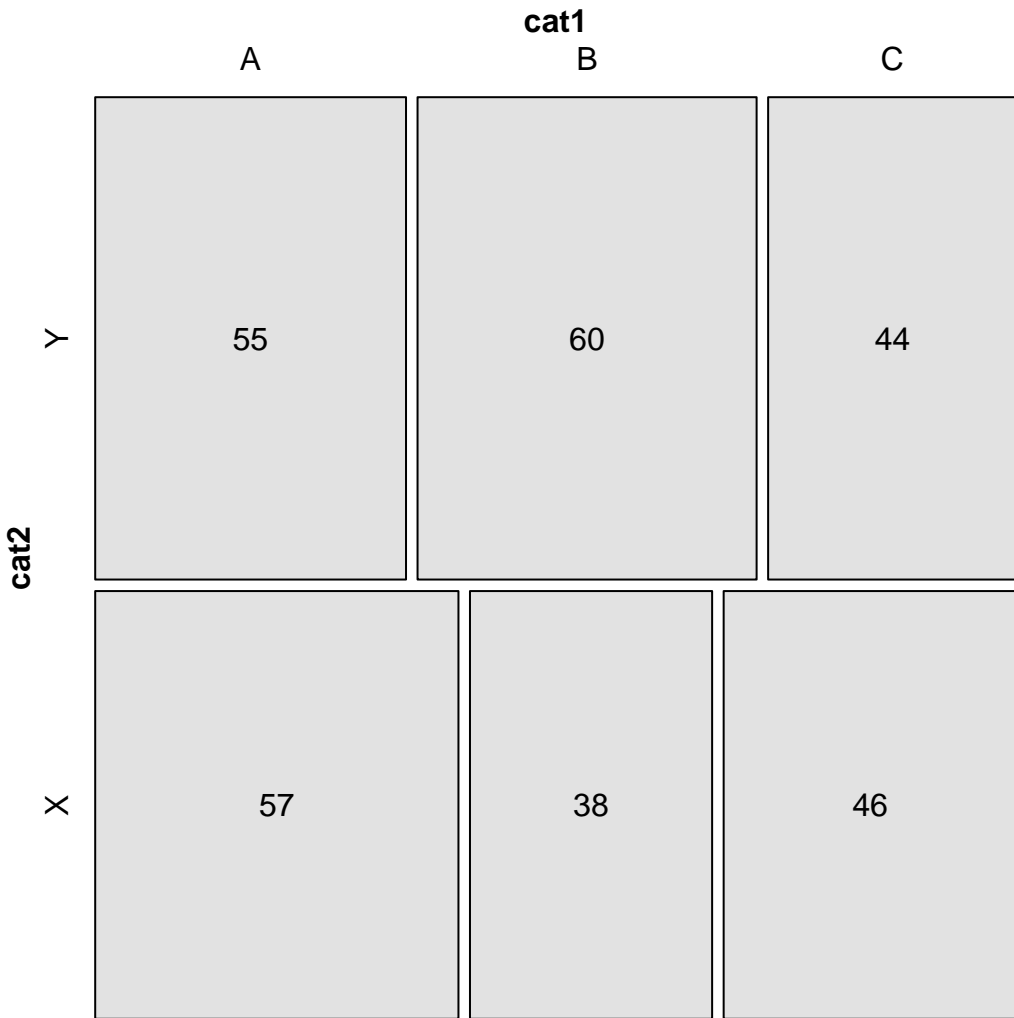
$y = a \cdot x + b$ , confidence level = 0.95 , adjusted  $R^2 = 0.99$   
slope  $a = 0.48$  , conf. interval [ 0.46 , 0.5 ] ,  $p = 1.9e-28$   
intercept  $b = 2.2$  , conf. interval [ 1.7 , 2.8 ] ,  $p = 9.3e-10$



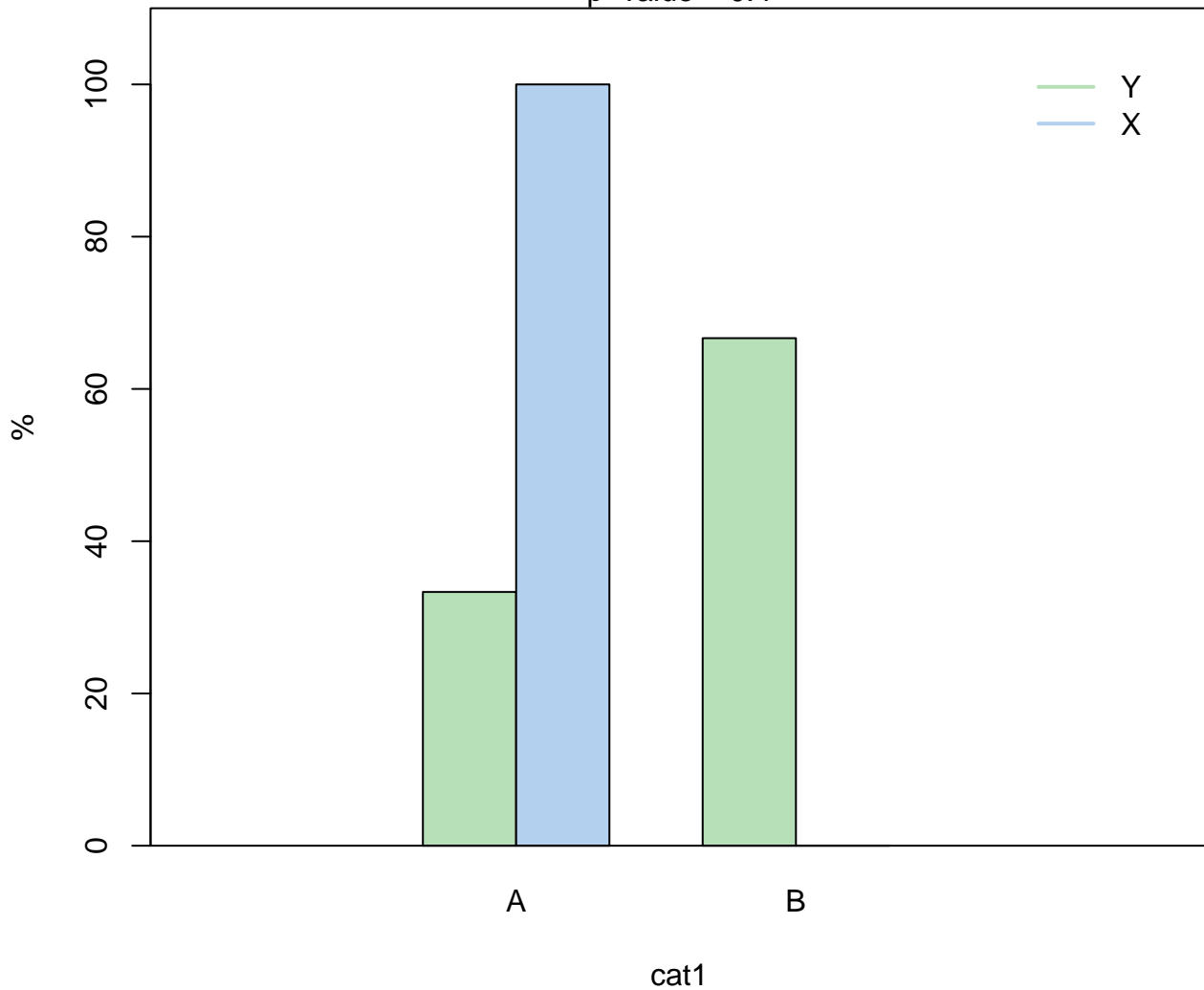


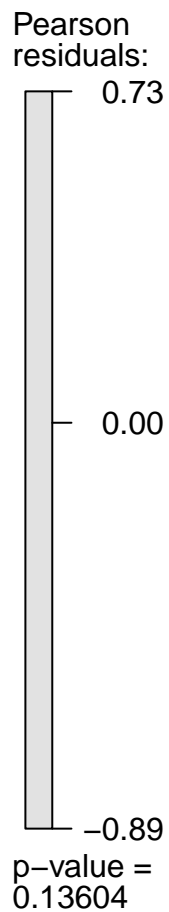
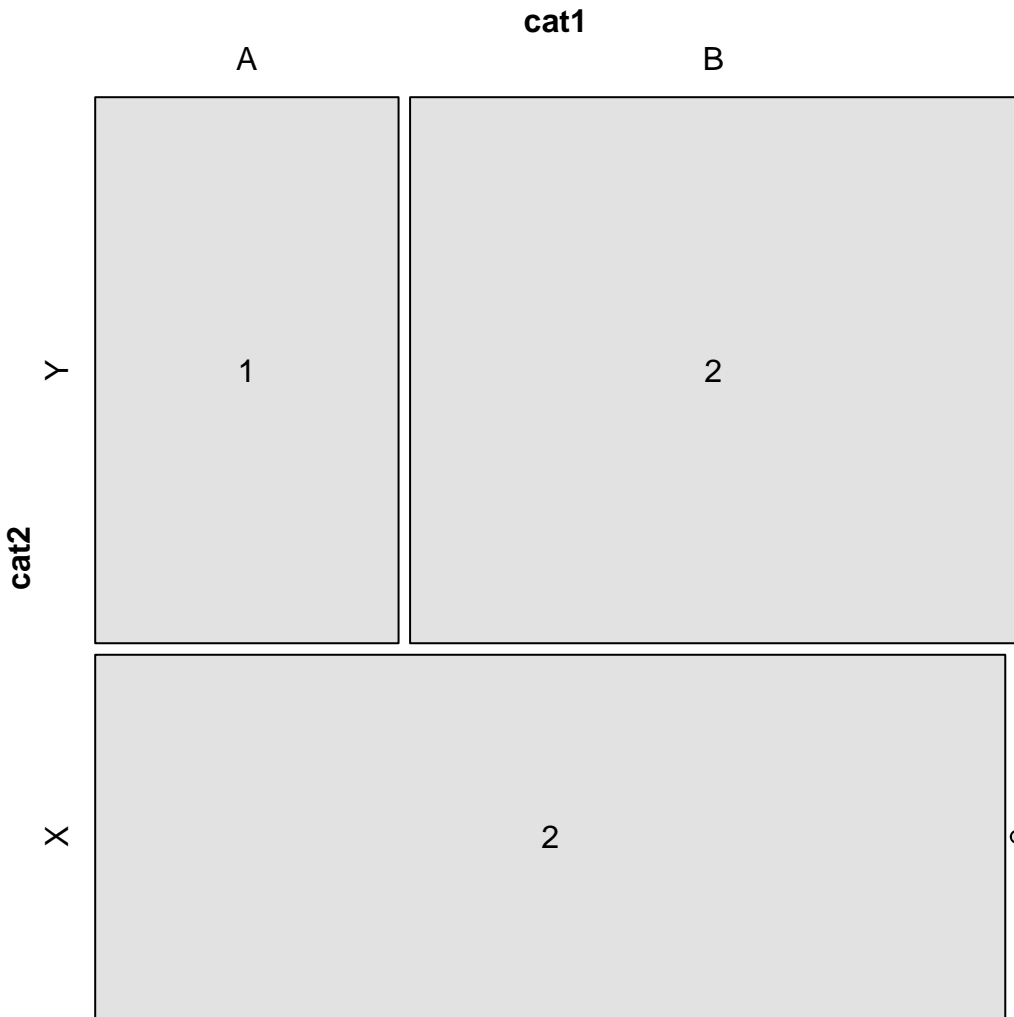
Pearson's Chi-squared test  
Chi-squared = 3.95, p-value = 0.139





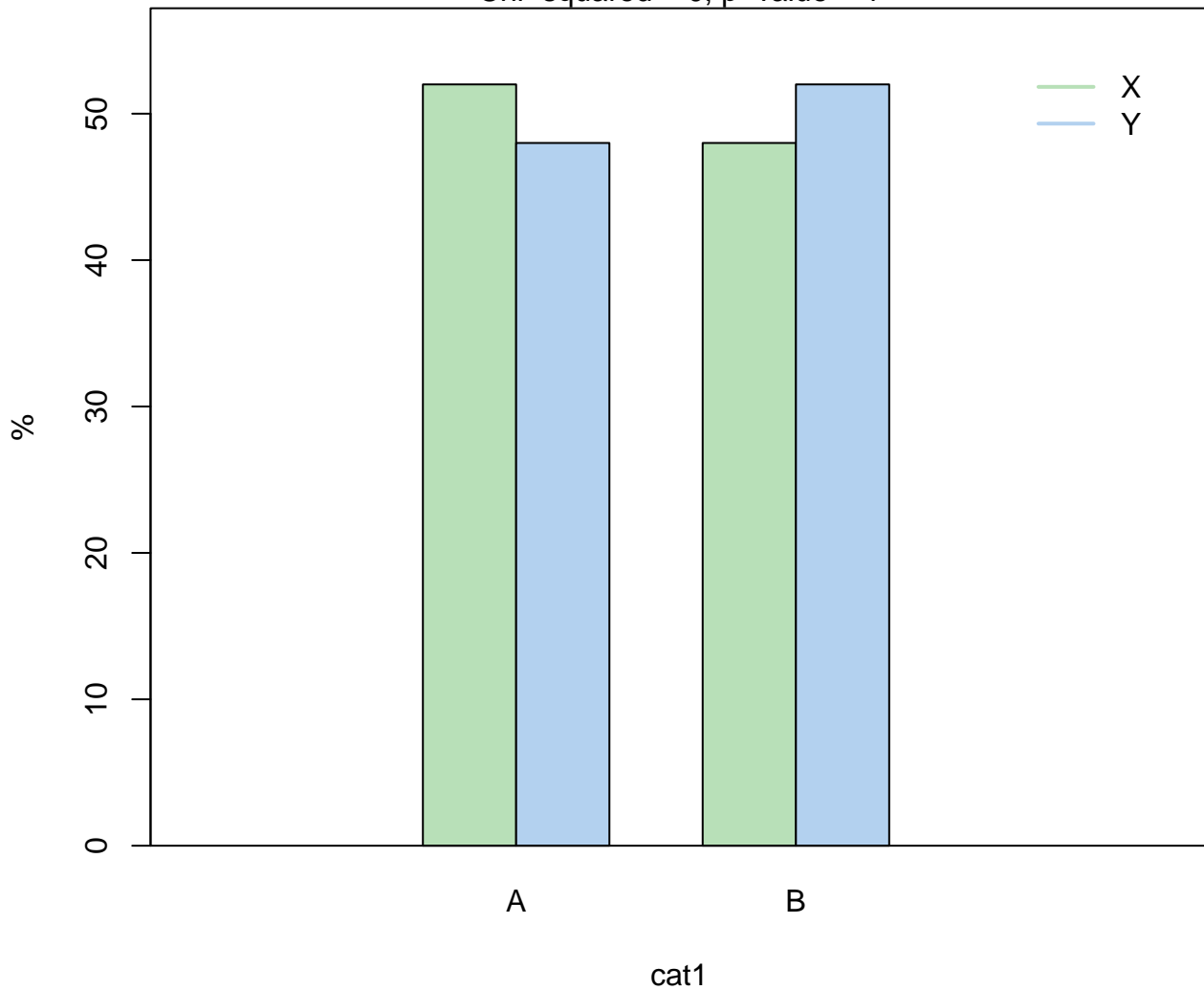
Fisher's Exact Test for Count Data,  
p-value = 0.4

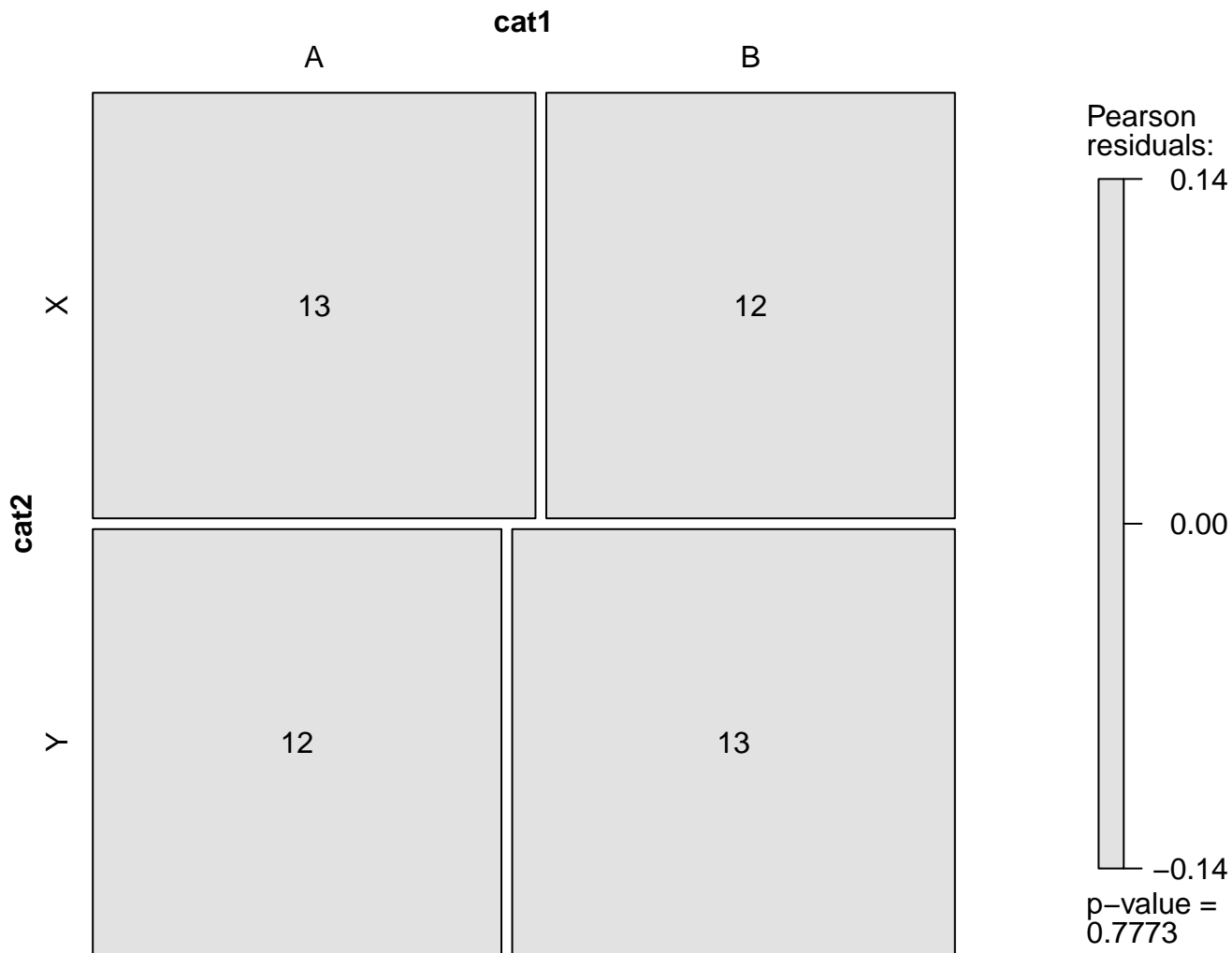




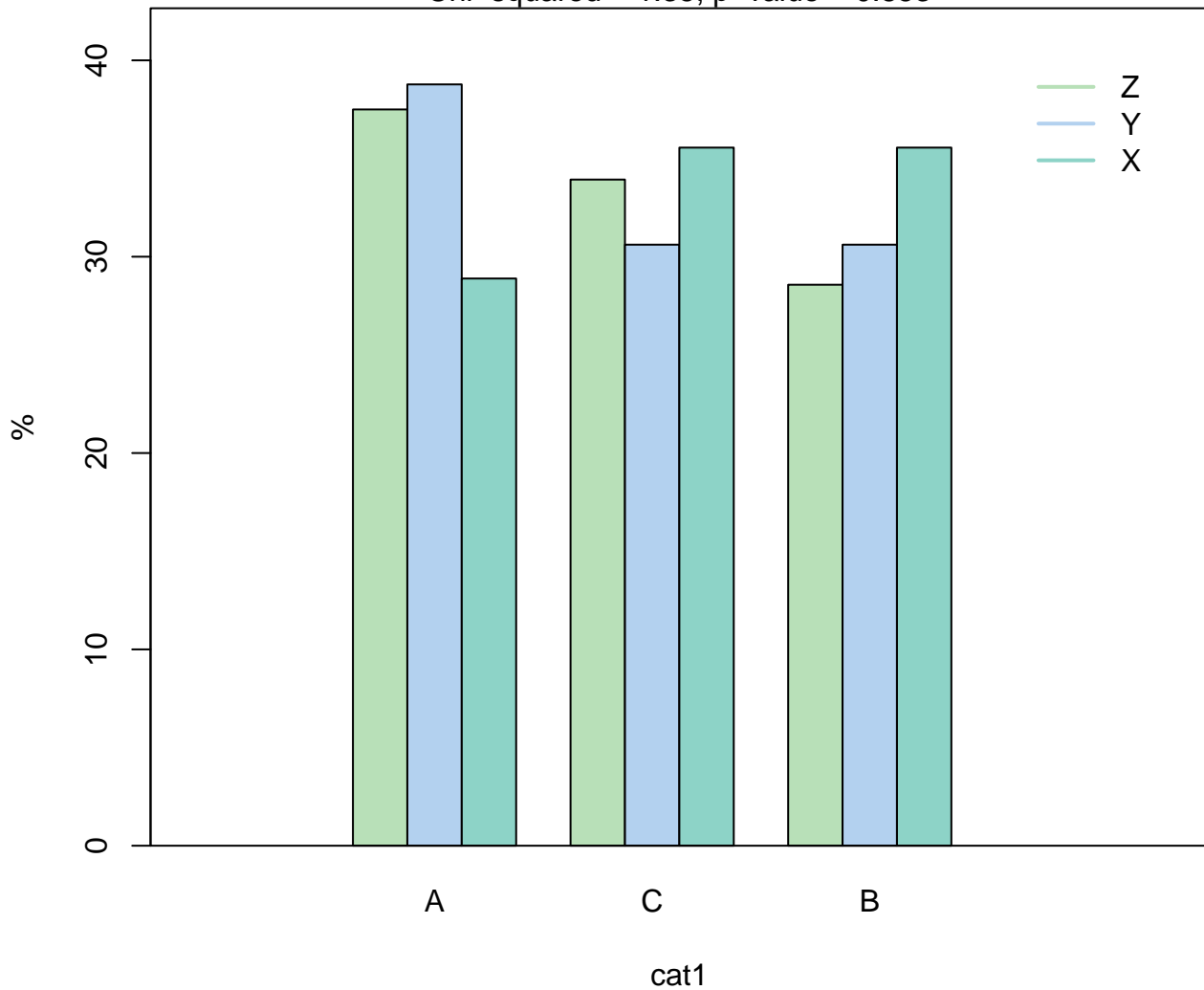
Pearson's Chi-squared test with Yates' continuity correction

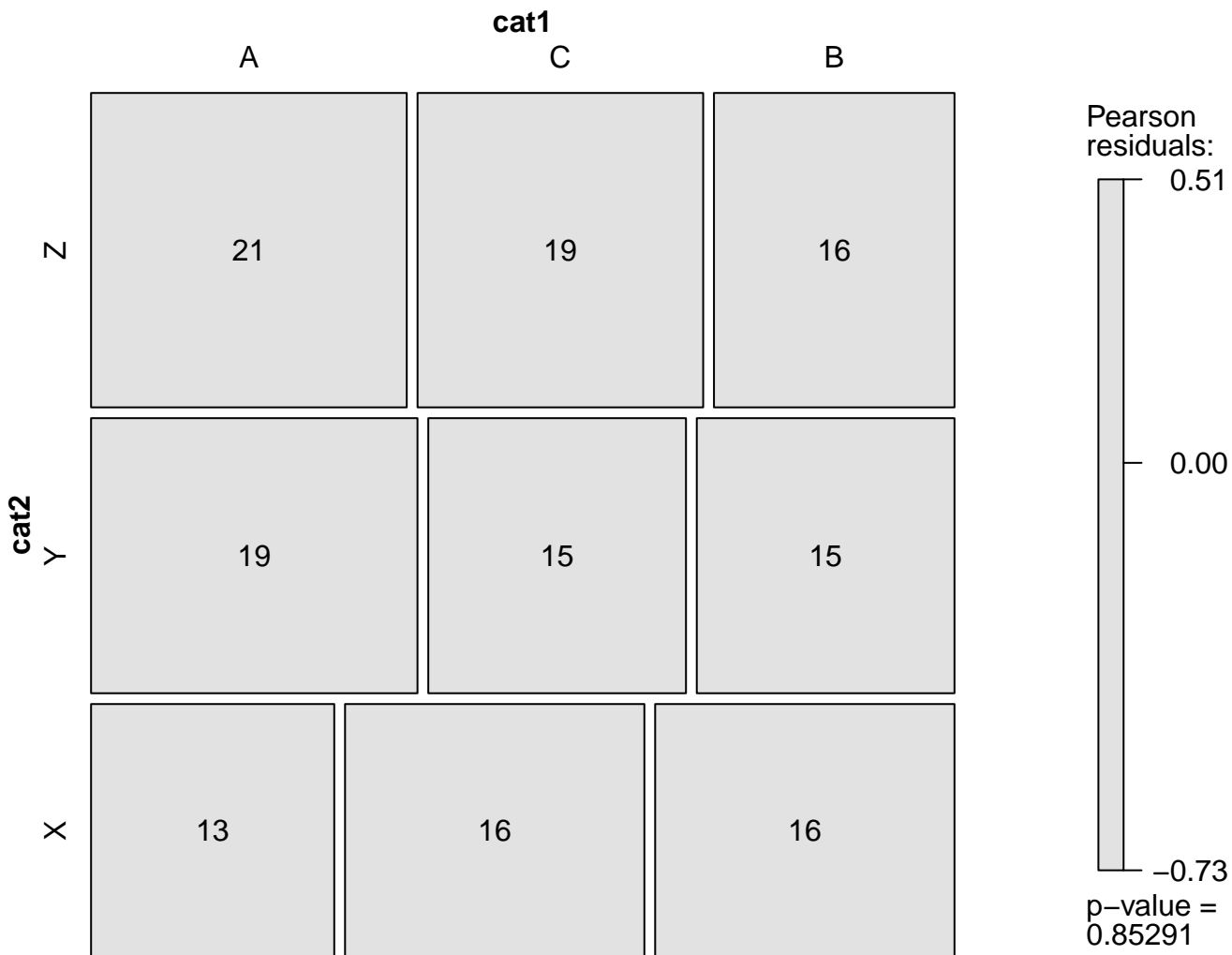
Chi-squared = 0, p-value = 1





Pearson's Chi-squared test  
Chi-squared = 1.35, p-value = 0.853

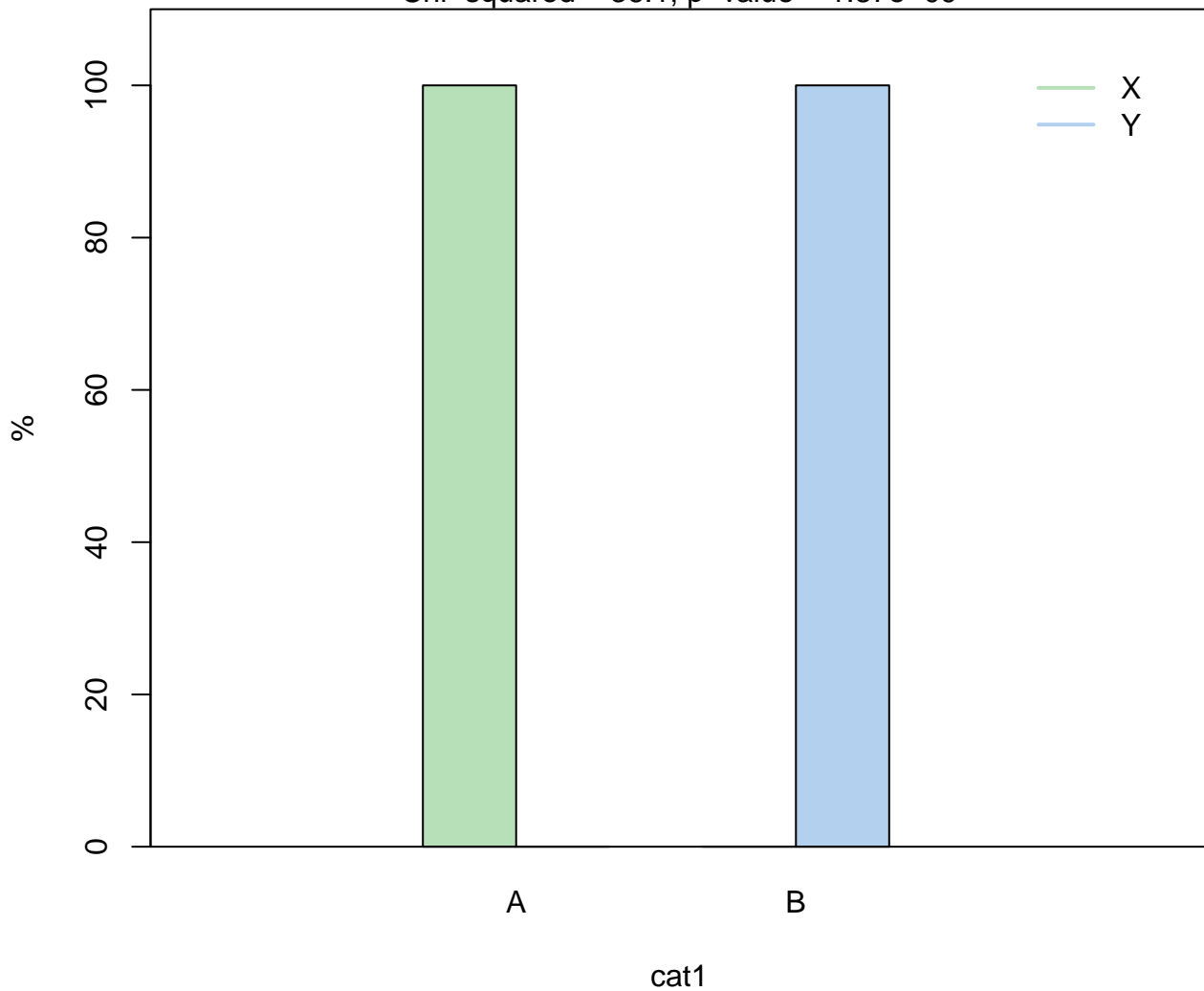


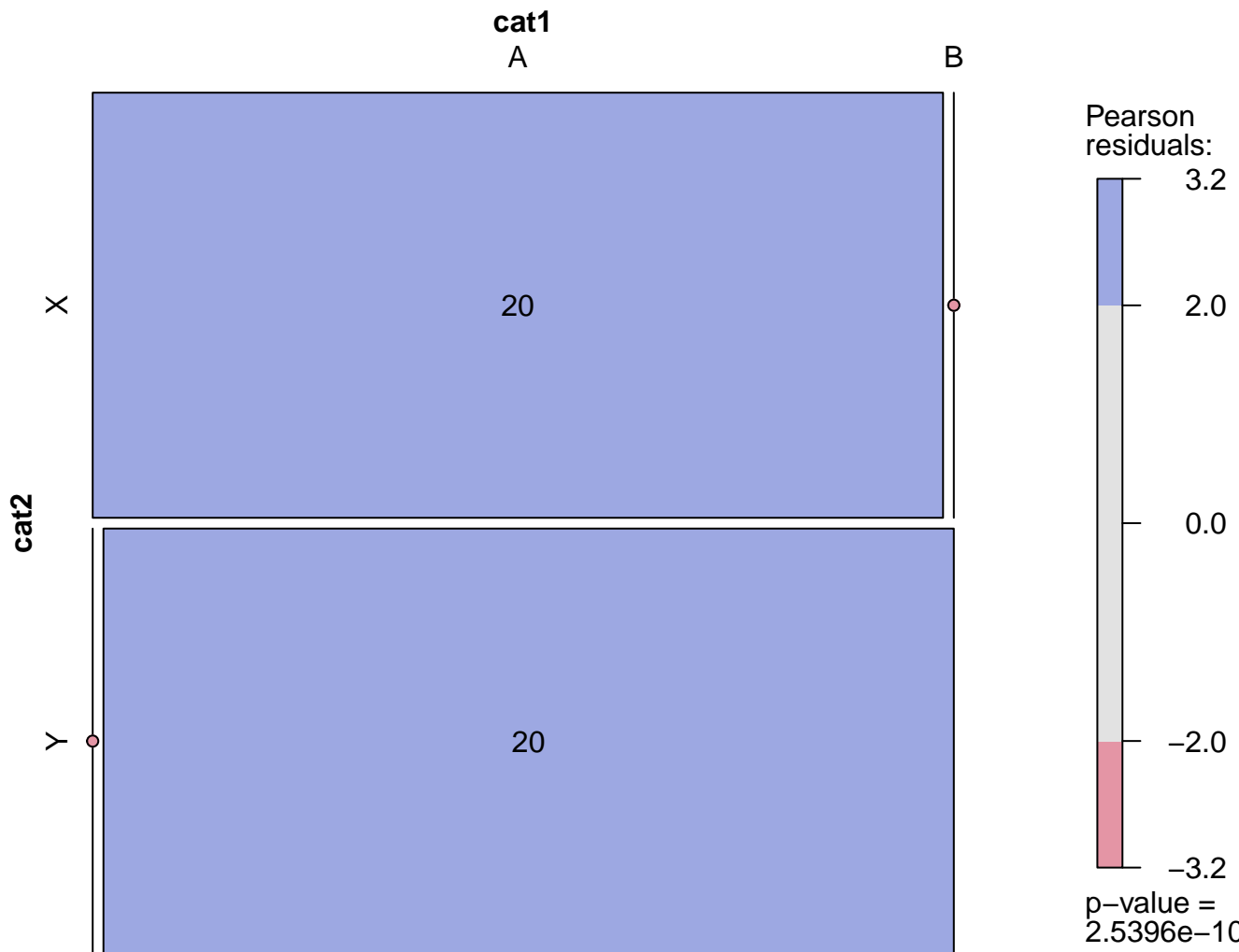




Pearson's Chi-squared test with Yates' continuity correction

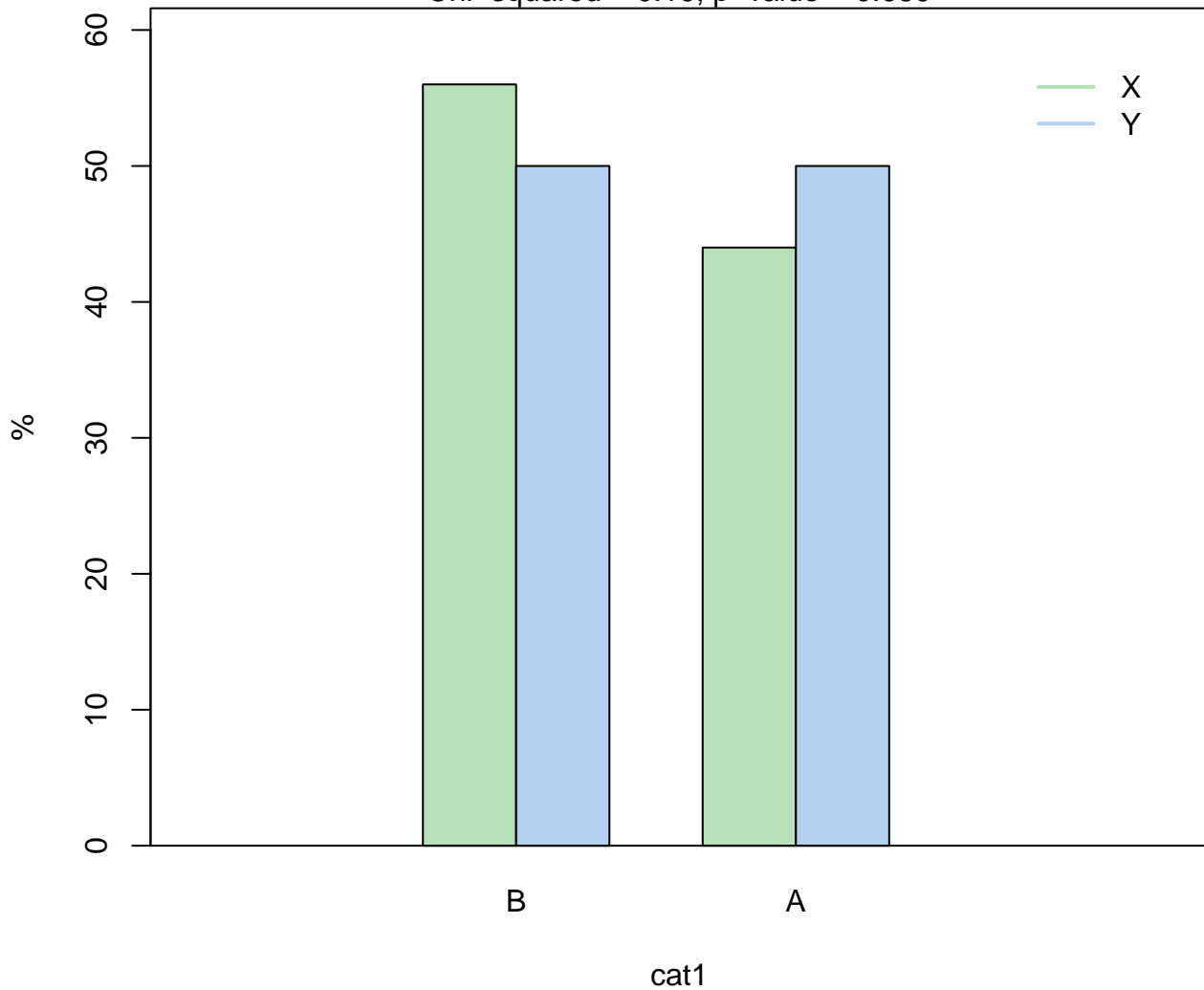
Chi-squared = 36.1, p-value = 1.87e-09

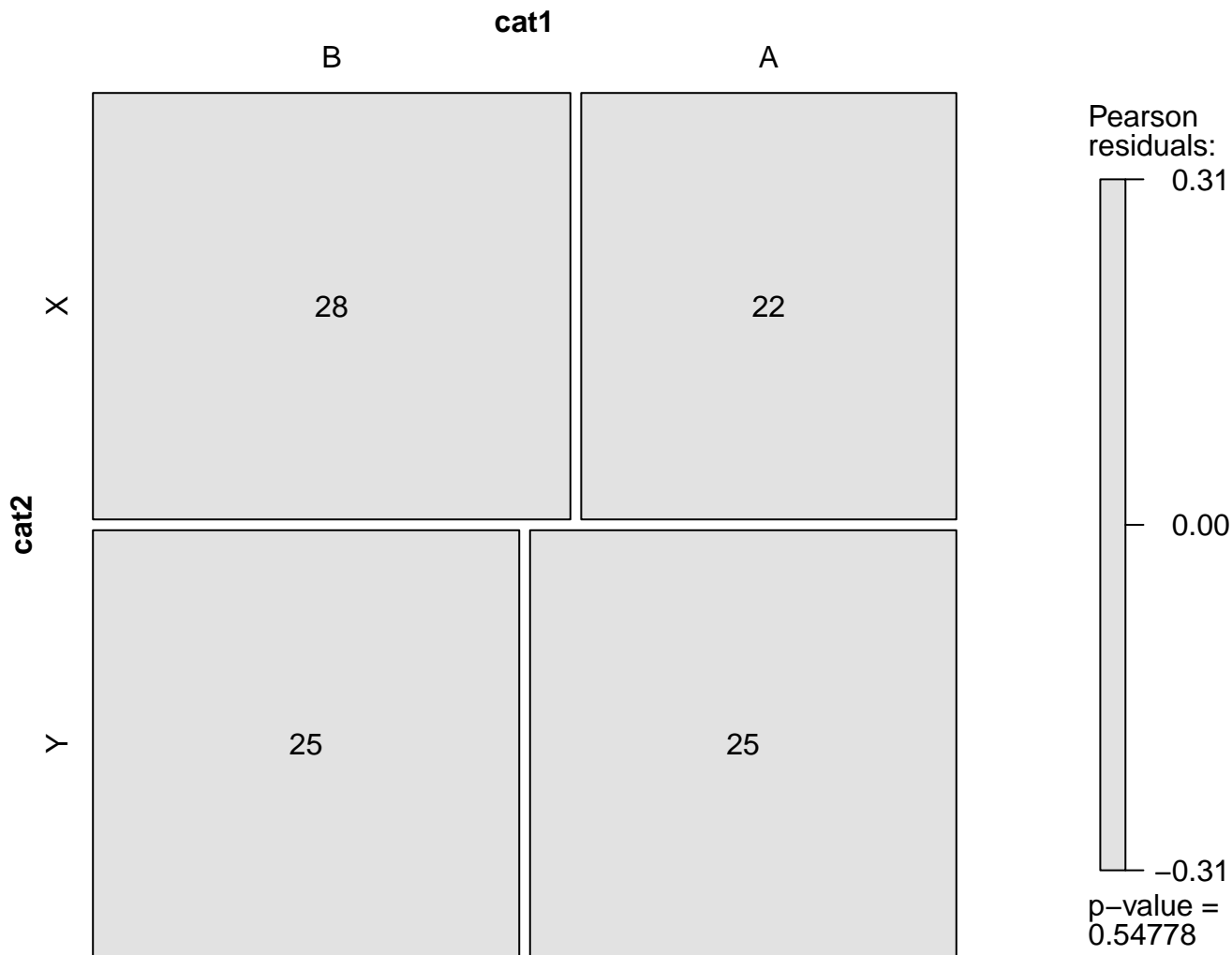




Pearson's Chi-squared test with Yates' continuity correction

Chi-squared = 0.16, p-value = 0.689



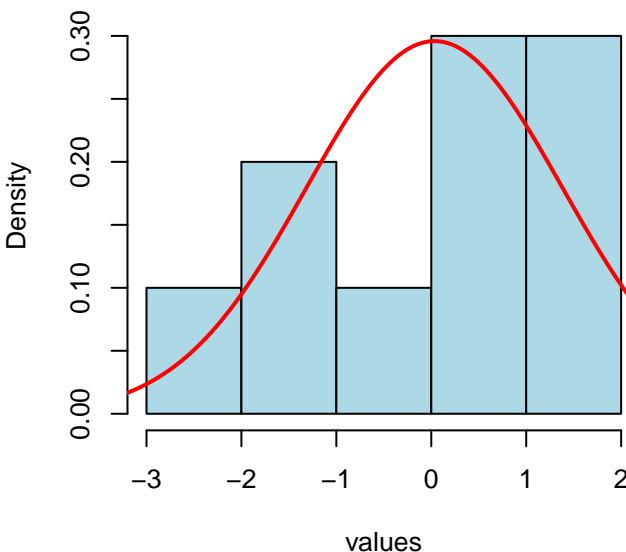




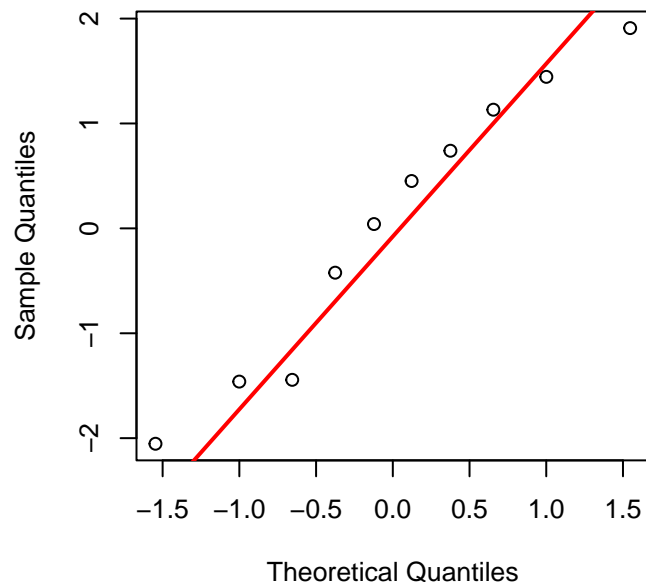
Check for normality of groups:

A – Shapiro–Wilk:  $p = 0.65$  , B – Shapiro–Wilk:  $p = 0.057$

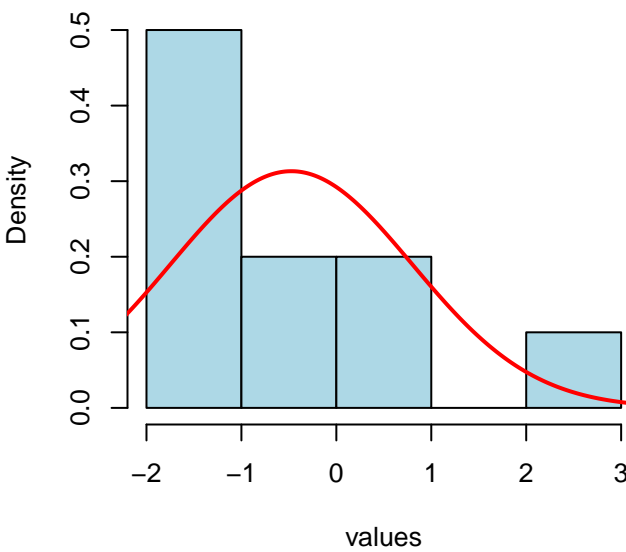
**Histogram – A**



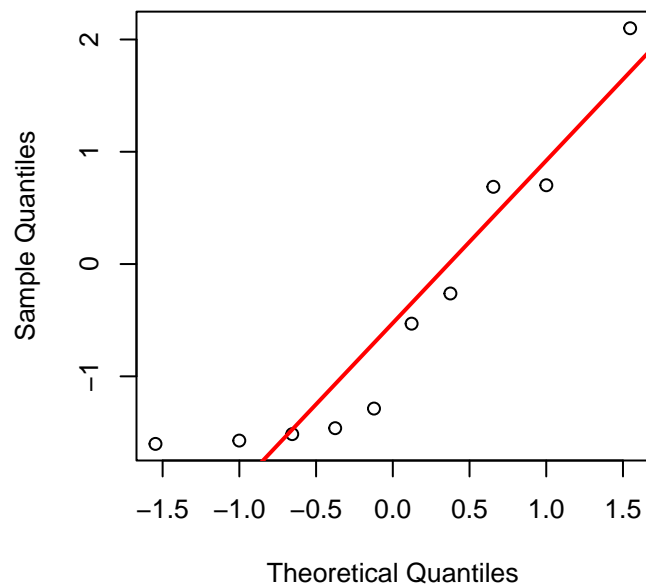
**Q-Q Plot – A**



**Histogram – B**

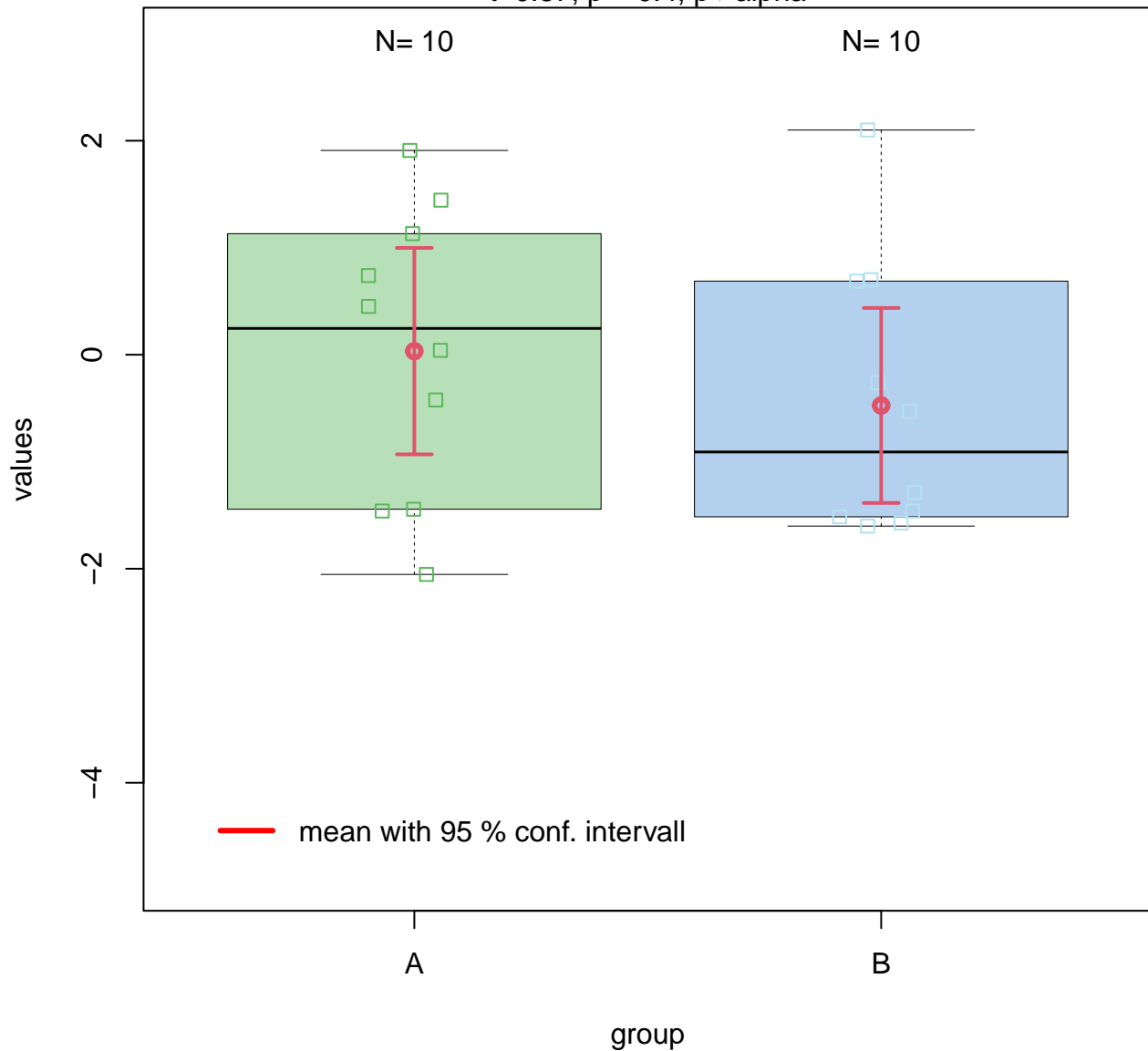


**Q-Q Plot – B**



Welch Two Sample t-test,  $\alpha = 0.05$

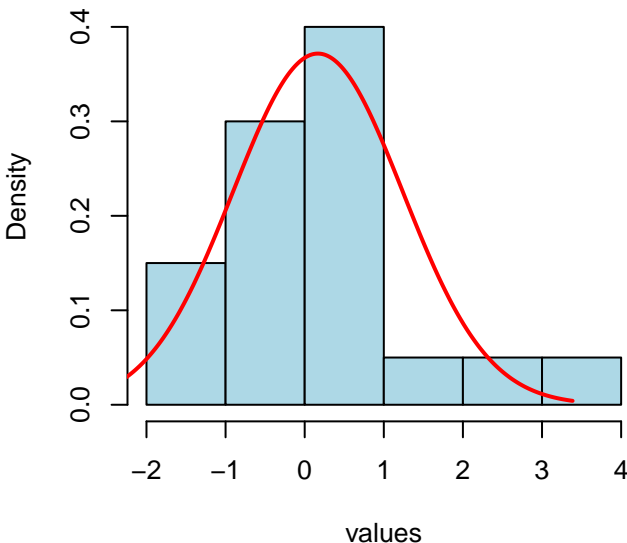
Null hypothesis: population mean values of group "A" equals population mean values of group  
 $t = 0.87$ ,  $p = 0.4$ ,  $p > \alpha$



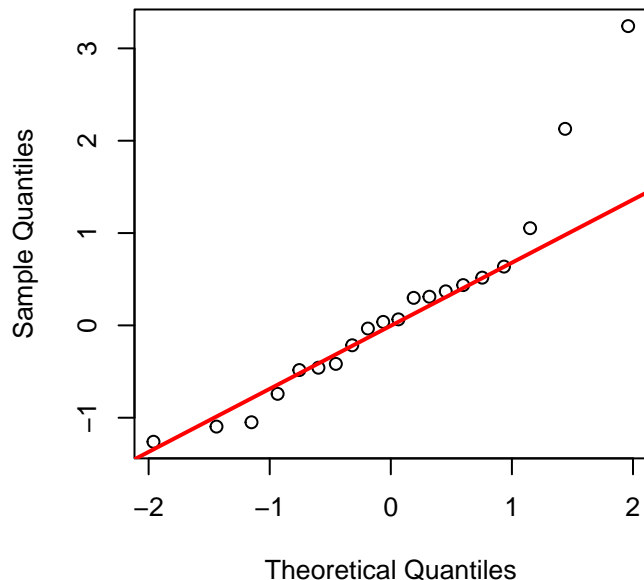
Check for normality of groups:

A – Shapiro–Wilk:  $p = 0.027$  , B – Shapiro–Wilk:  $p = 0.28$

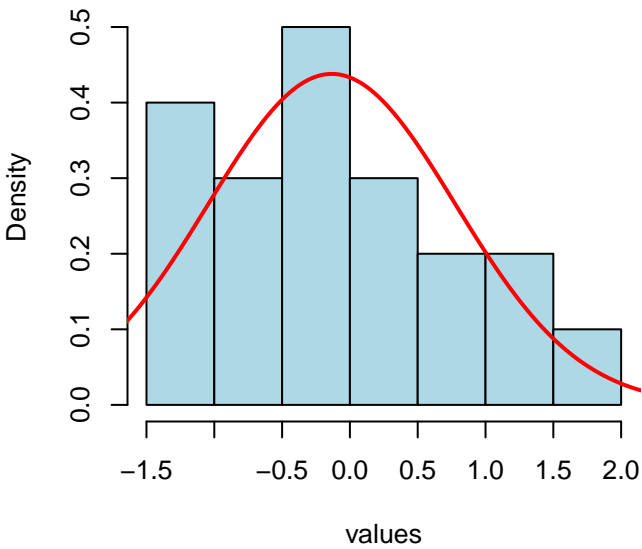
**Histogram – A**



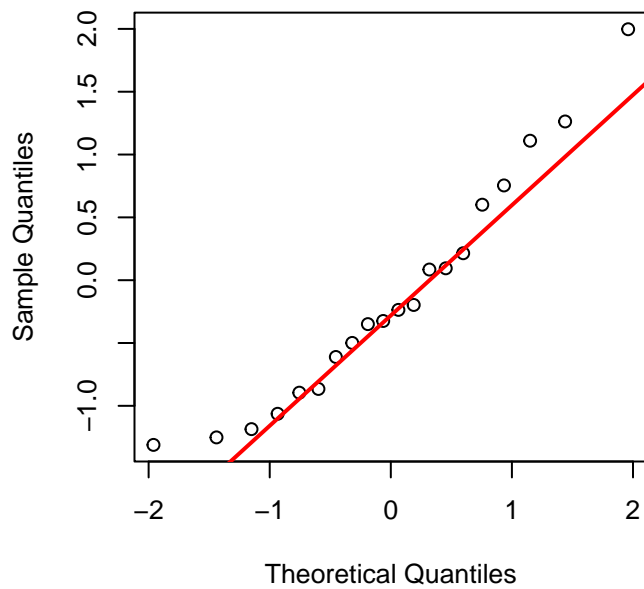
**Q-Q Plot – A**



**Histogram – B**



**Q-Q Plot – B**

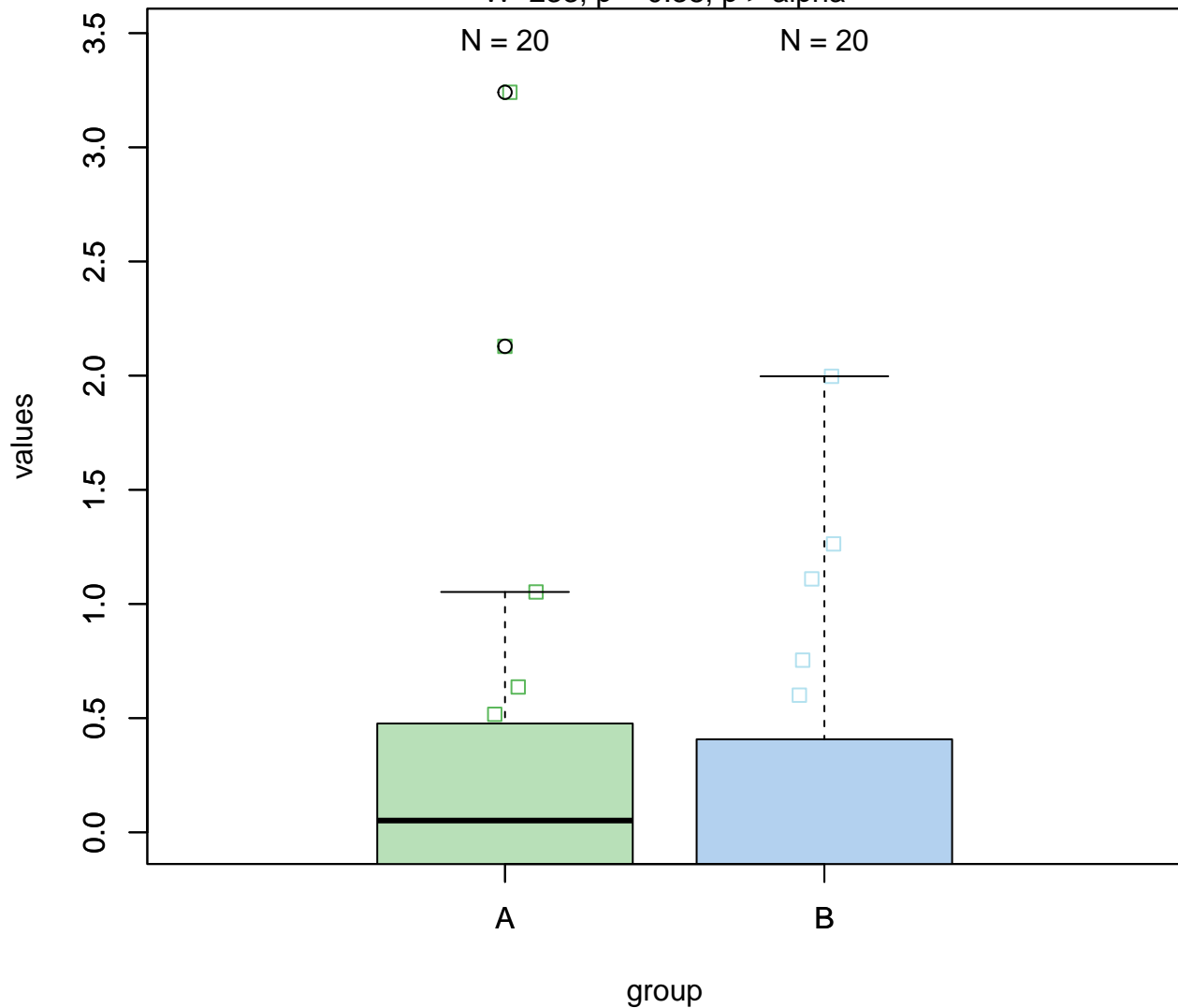




Wilcoxon rank sum exact test, alpha = 0.05

Null hypoth.: population median values of group A equals population median values of group

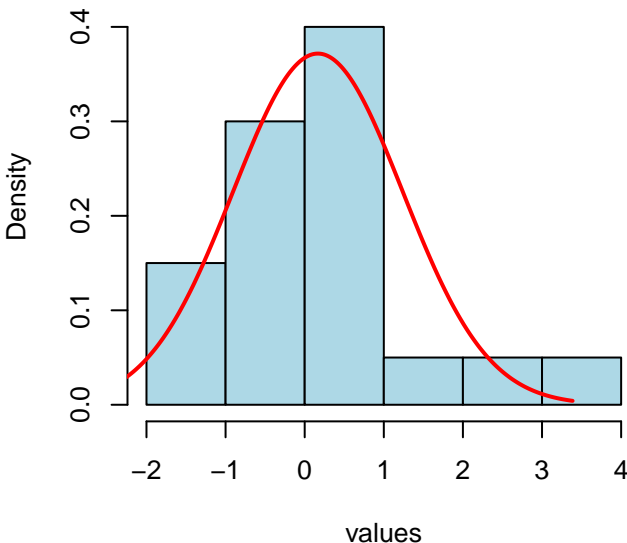
$W=233$ ,  $p = 0.38$ ,  $p > \alpha$



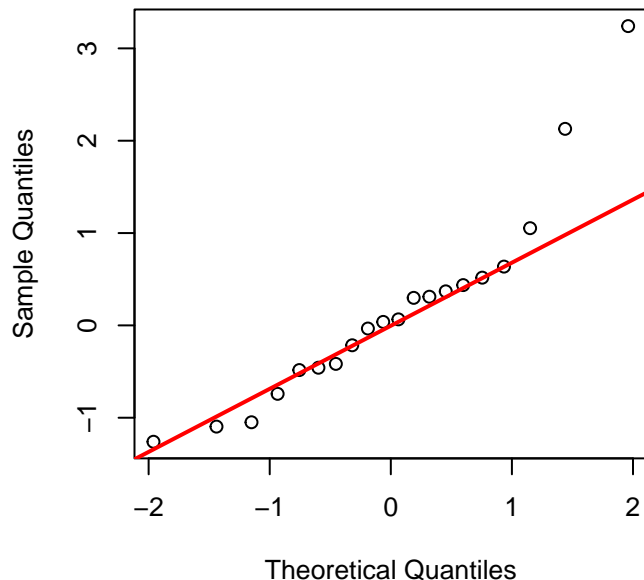
Check for normality of groups:

A – Shapiro–Wilk:  $p = 0.027$  , B – Shapiro–Wilk:  $p = 0.28$

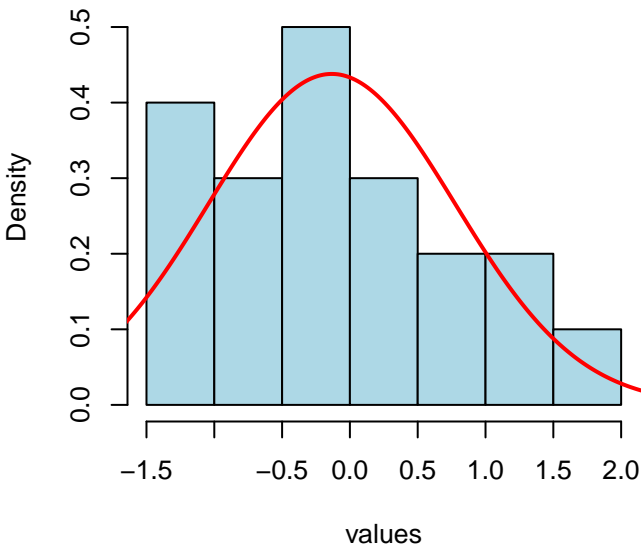
**Histogram – A**



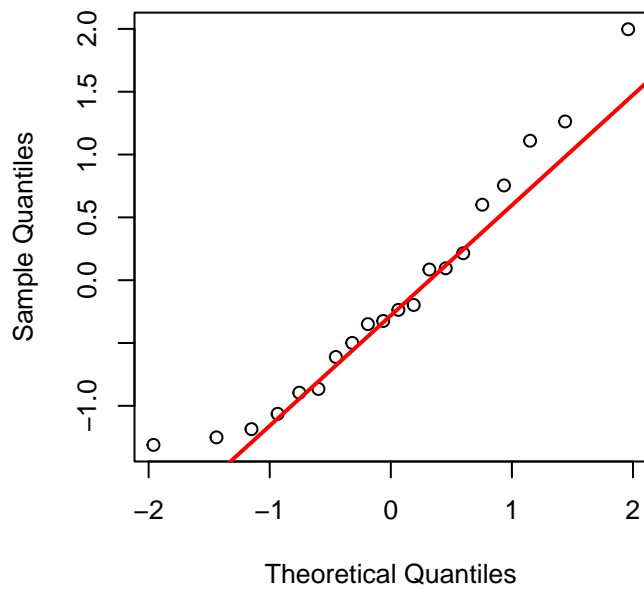
**Q–Q Plot – A**



**Histogram – B**



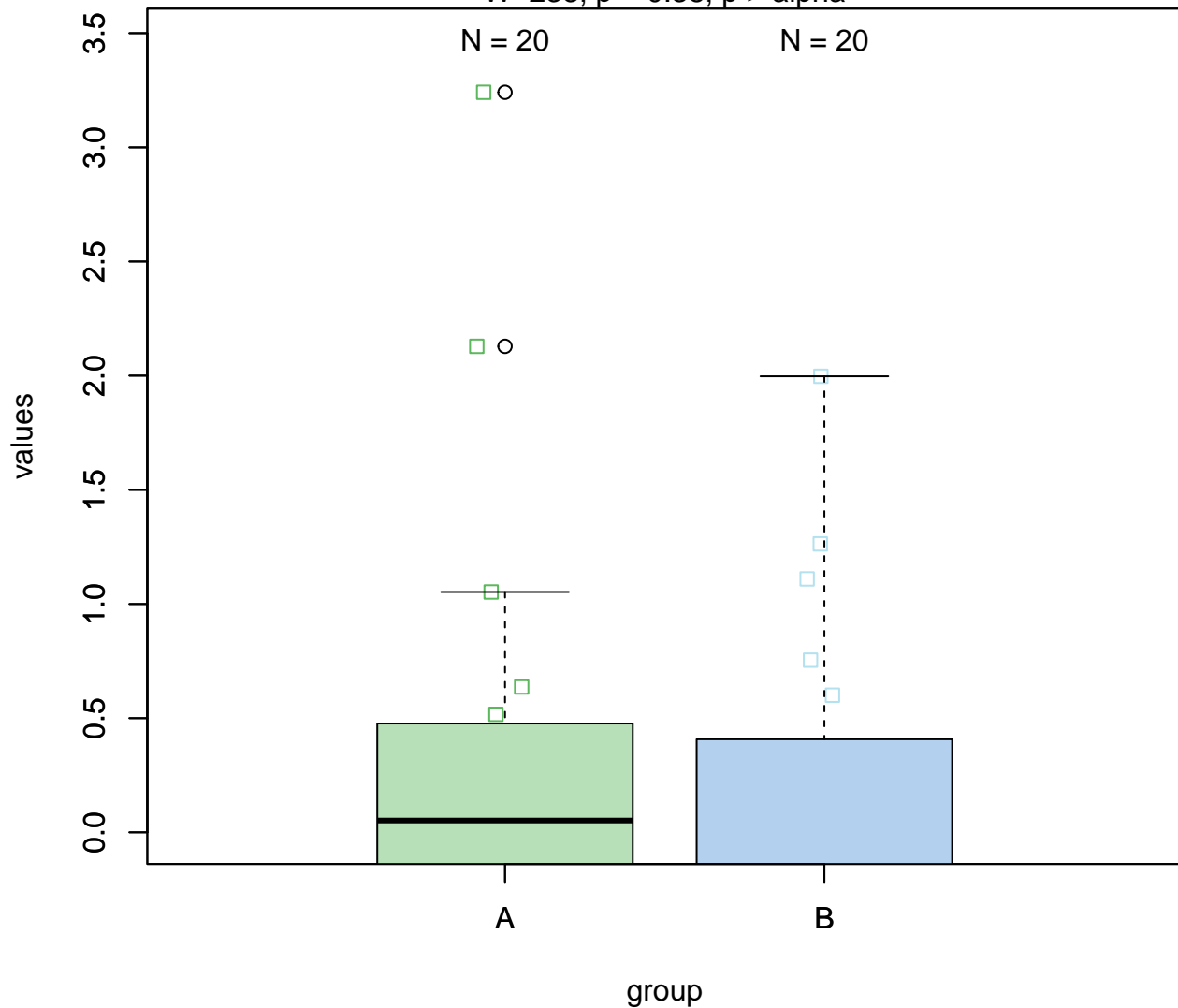
**Q–Q Plot – B**



Wilcoxon rank sum exact test, alpha = 0.1

Null hypoth.: population median values of group A equals population median values of group B

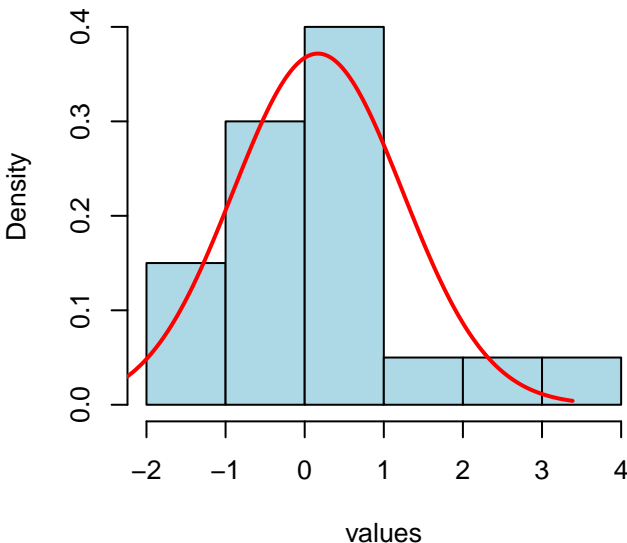
$W=233$ ,  $p = 0.38$ ,  $p > \alpha$



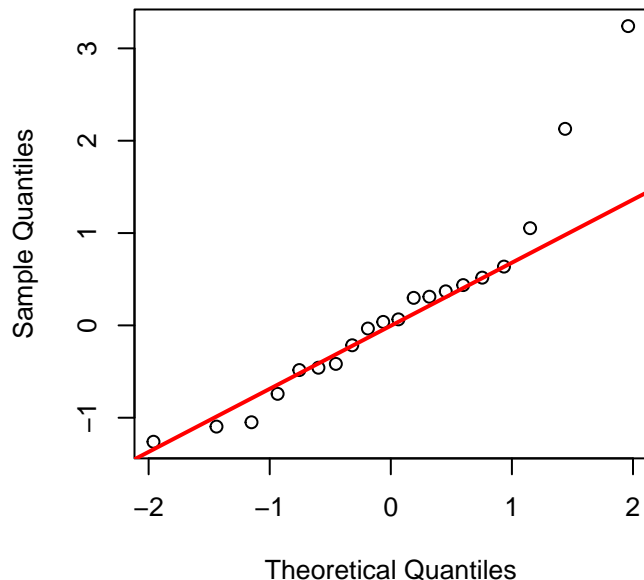
Check for normality of groups:

A – Shapiro–Wilk:  $p = 0.027$  , B – Shapiro–Wilk:  $p = 0.28$

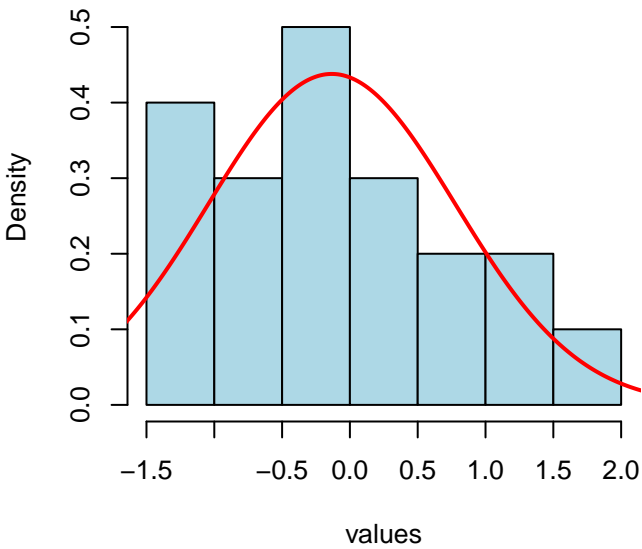
**Histogram – A**



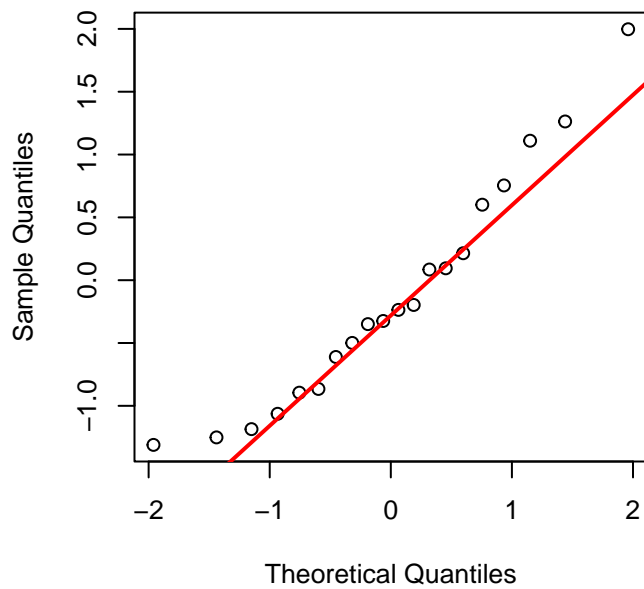
**Q–Q Plot – A**



**Histogram – B**

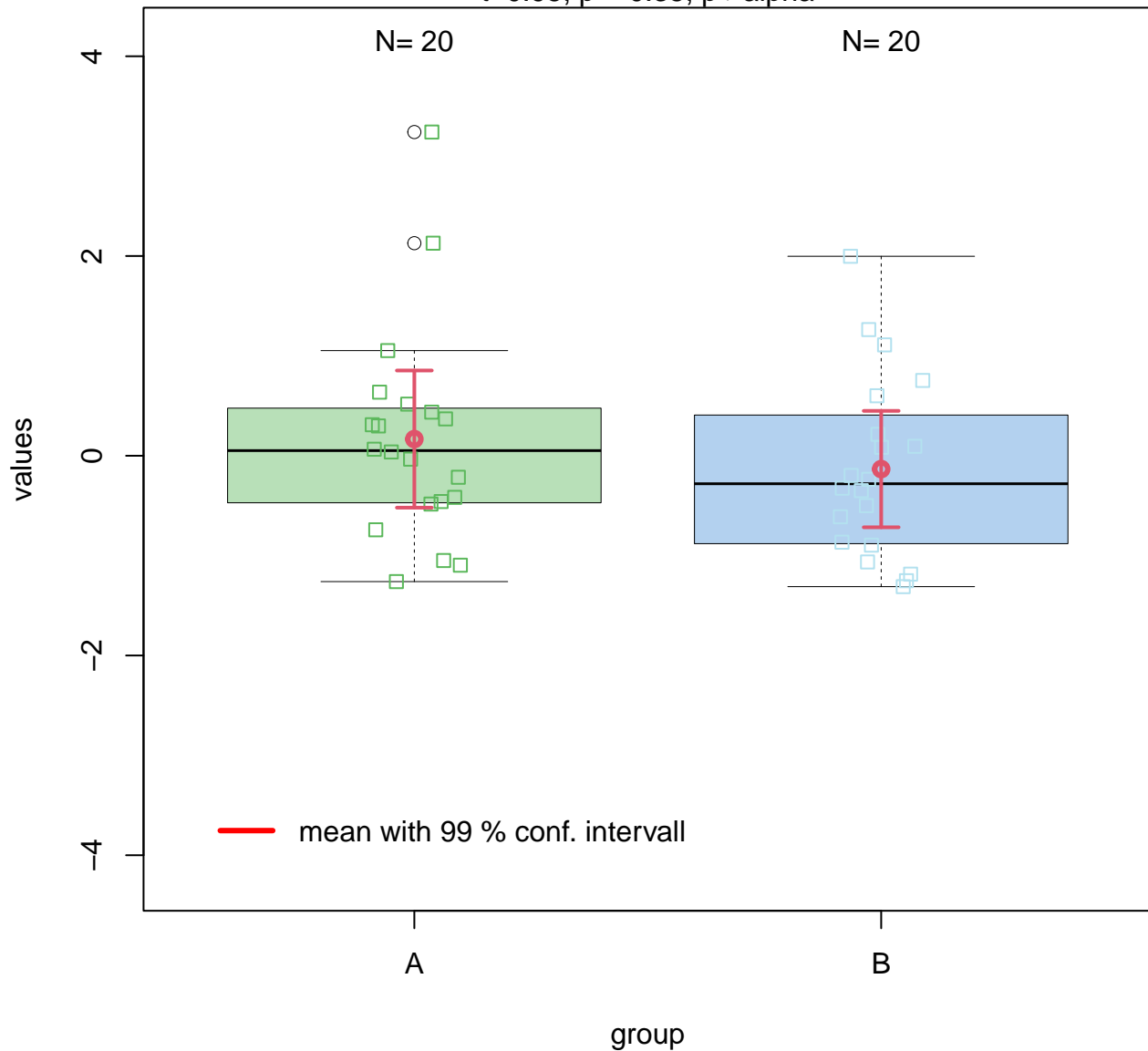


**Q–Q Plot – B**



Welch Two Sample t-test,  $\alpha = 0.01$

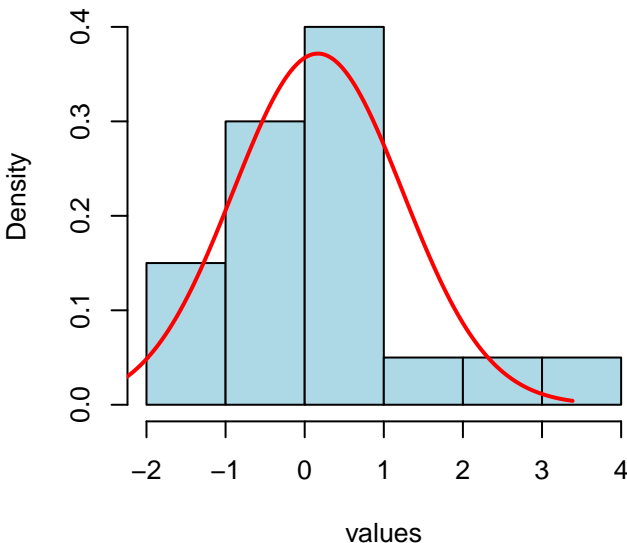
Null hypothesis: population mean values of group "A" equals population mean values of group  
 $t=0.95$ ,  $p = 0.35$ ,  $p > \alpha$



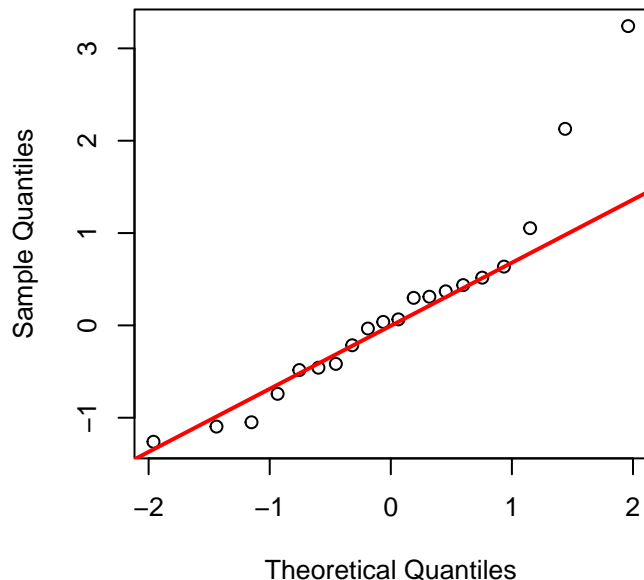
Check for normality of groups:

A – Shapiro–Wilk:  $p = 0.027$  , B – Shapiro–Wilk:  $p = 0.28$

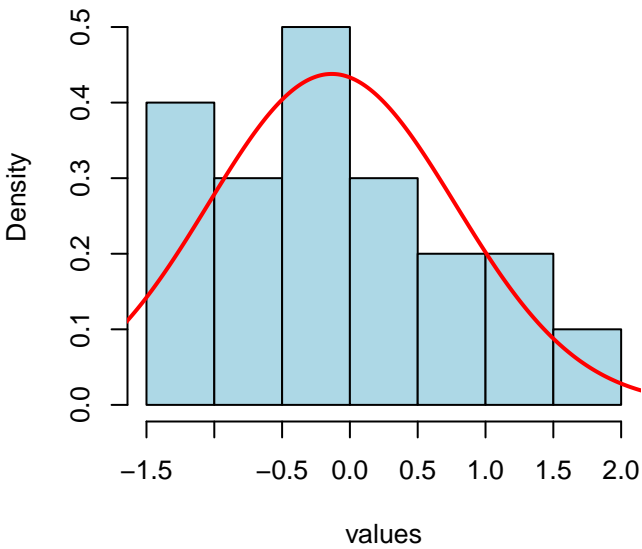
**Histogram – A**



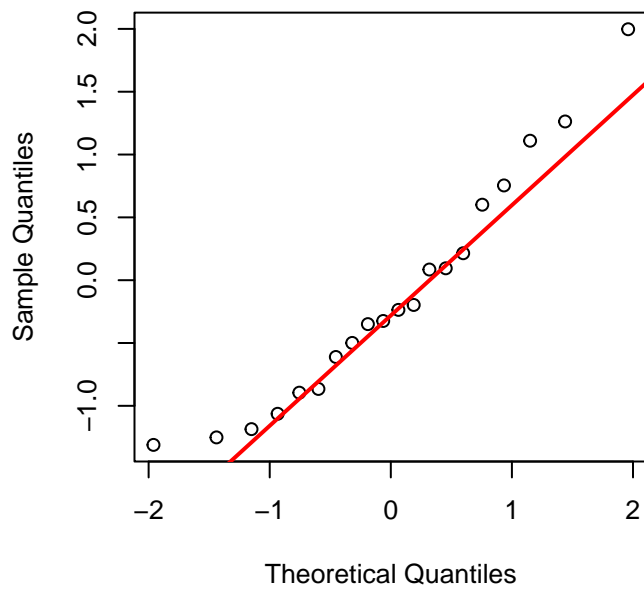
**Q–Q Plot – A**



**Histogram – B**



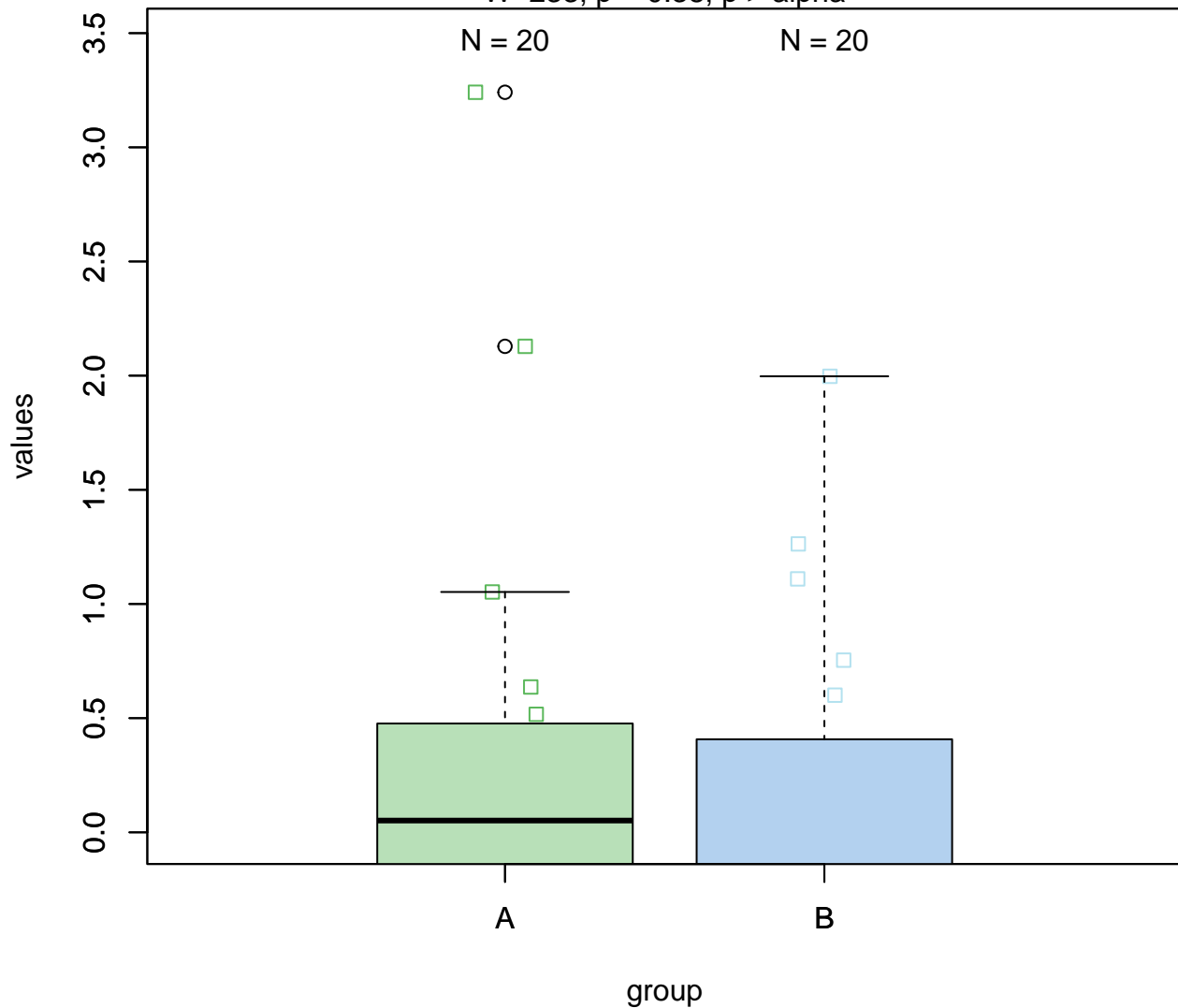
**Q–Q Plot – B**



Wilcoxon rank sum exact test, alpha = 0.05

Null hypoth.: population median values of group A equals population median values of group B

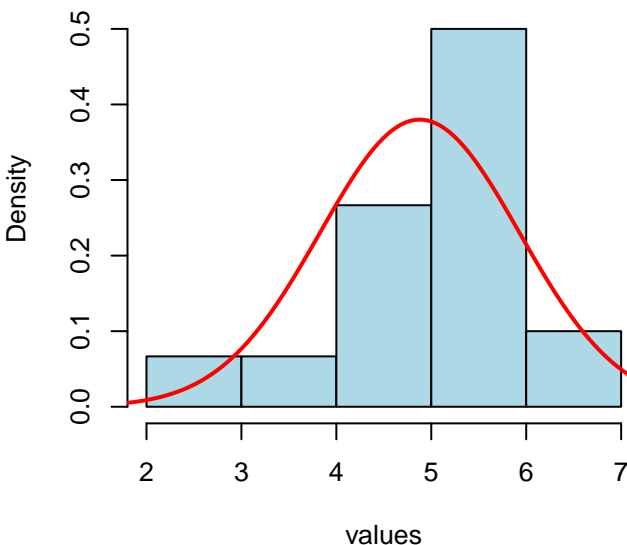
$W=233$ ,  $p = 0.38$ ,  $p > \alpha$



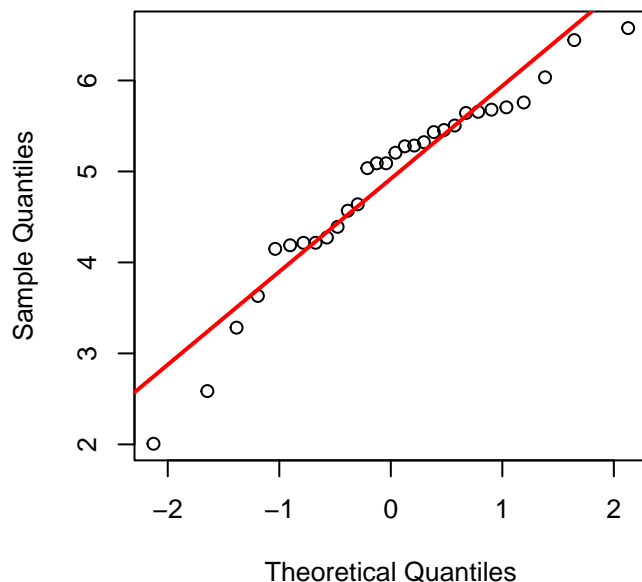
Check for normality of groups:

High – Shapiro–Wilk:  $p = 0.064$  , Low – Shapiro–Wilk:  $p = 0.35$

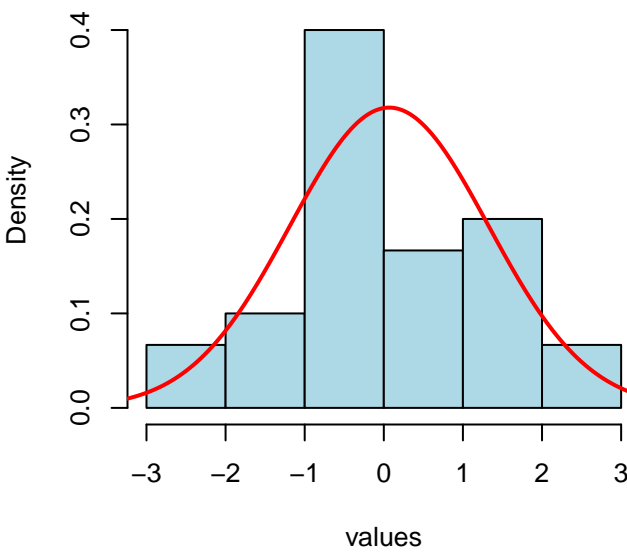
**Histogram – High**



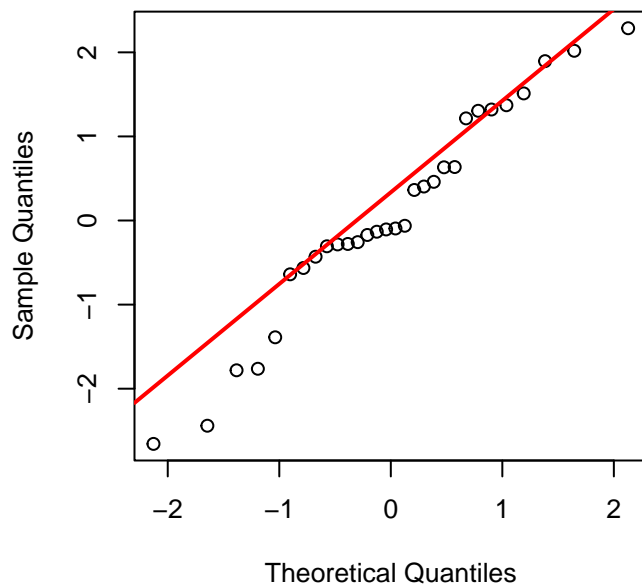
**Q-Q Plot – High**



**Histogram – Low**



**Q-Q Plot – Low**

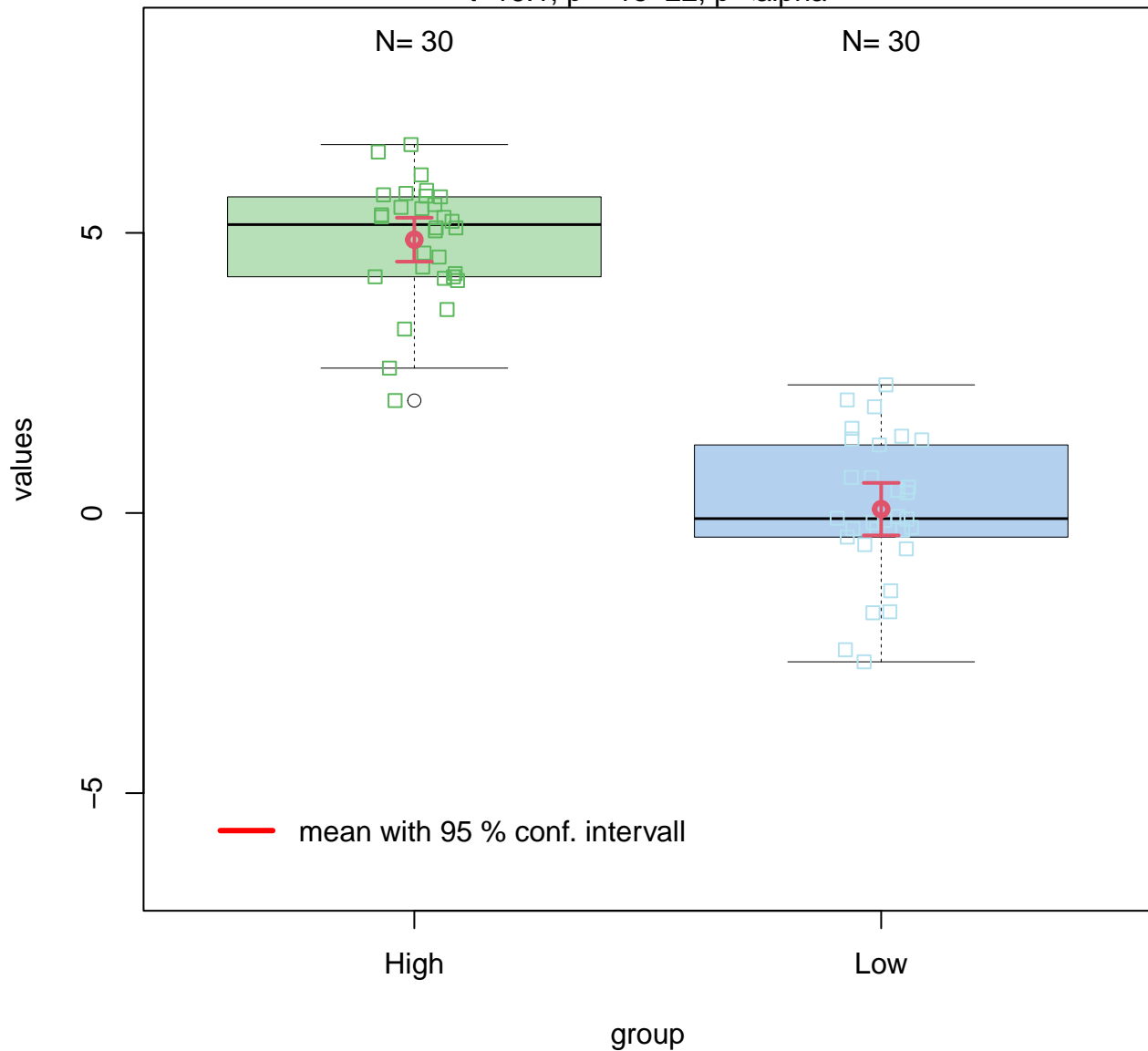




Welch Two Sample t-test,  $\alpha = 0.05$

Null hypothesis: population mean values of group "High" equals population mean values of group "Low"

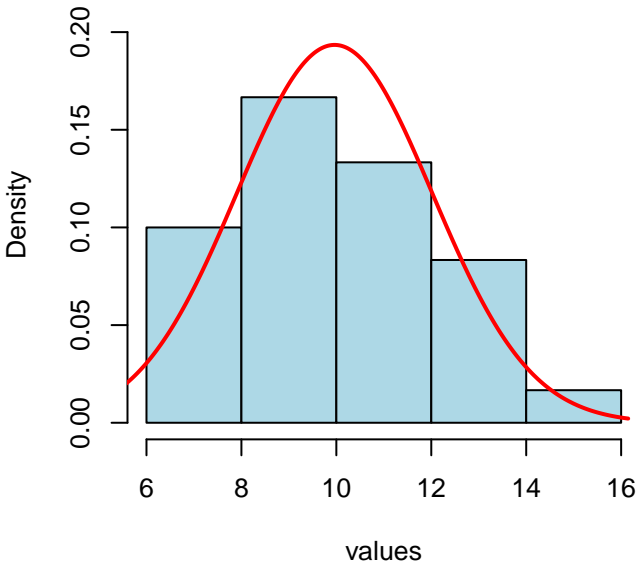
$t = 16.1$ ,  $p = 1e-22$ ,  $p < \alpha$



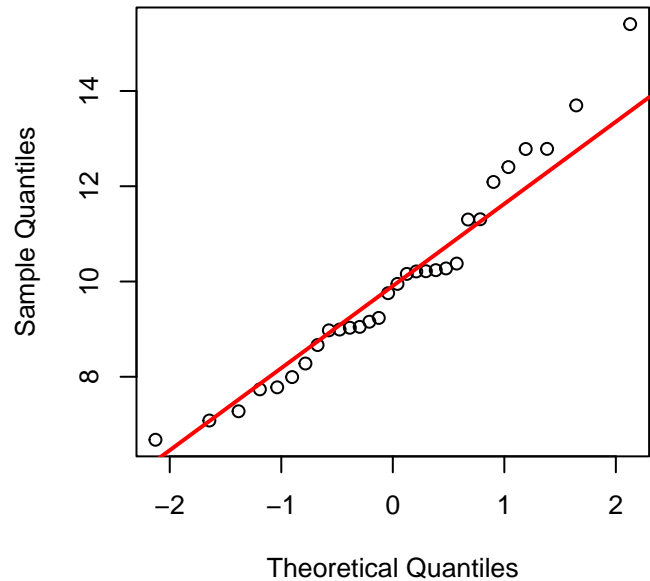
Check for normality of groups:

A – Shapiro–Wilk:  $p = 0.27$  , B – Shapiro–Wilk:  $p = 0.59$

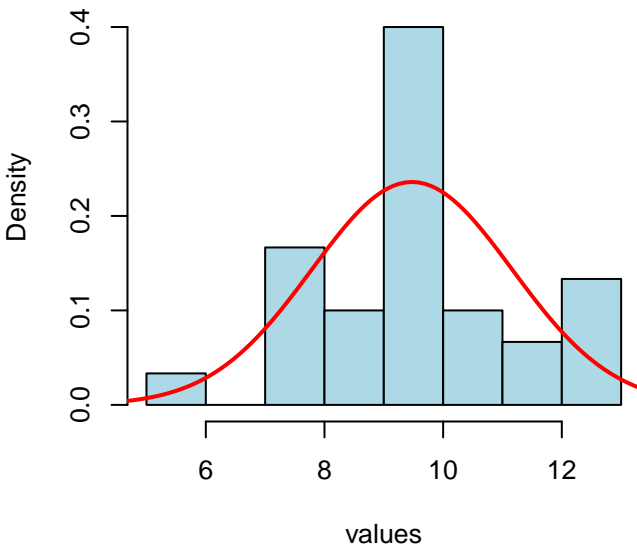
**Histogram – A**



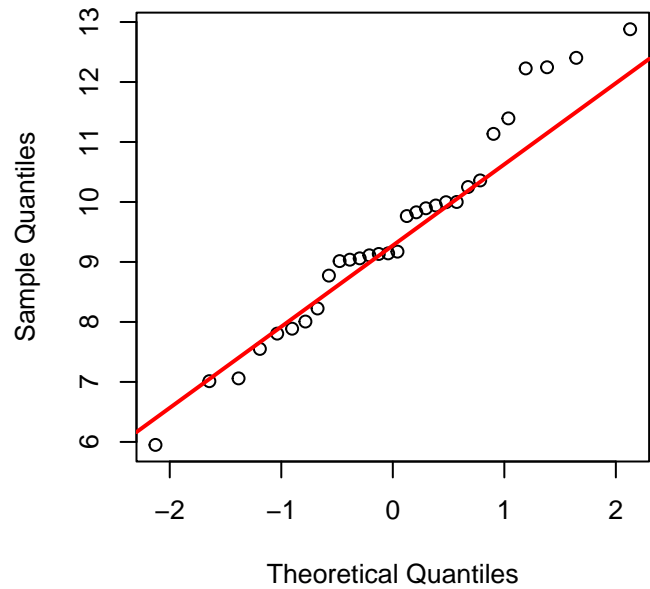
**Q-Q Plot – A**



**Histogram – B**

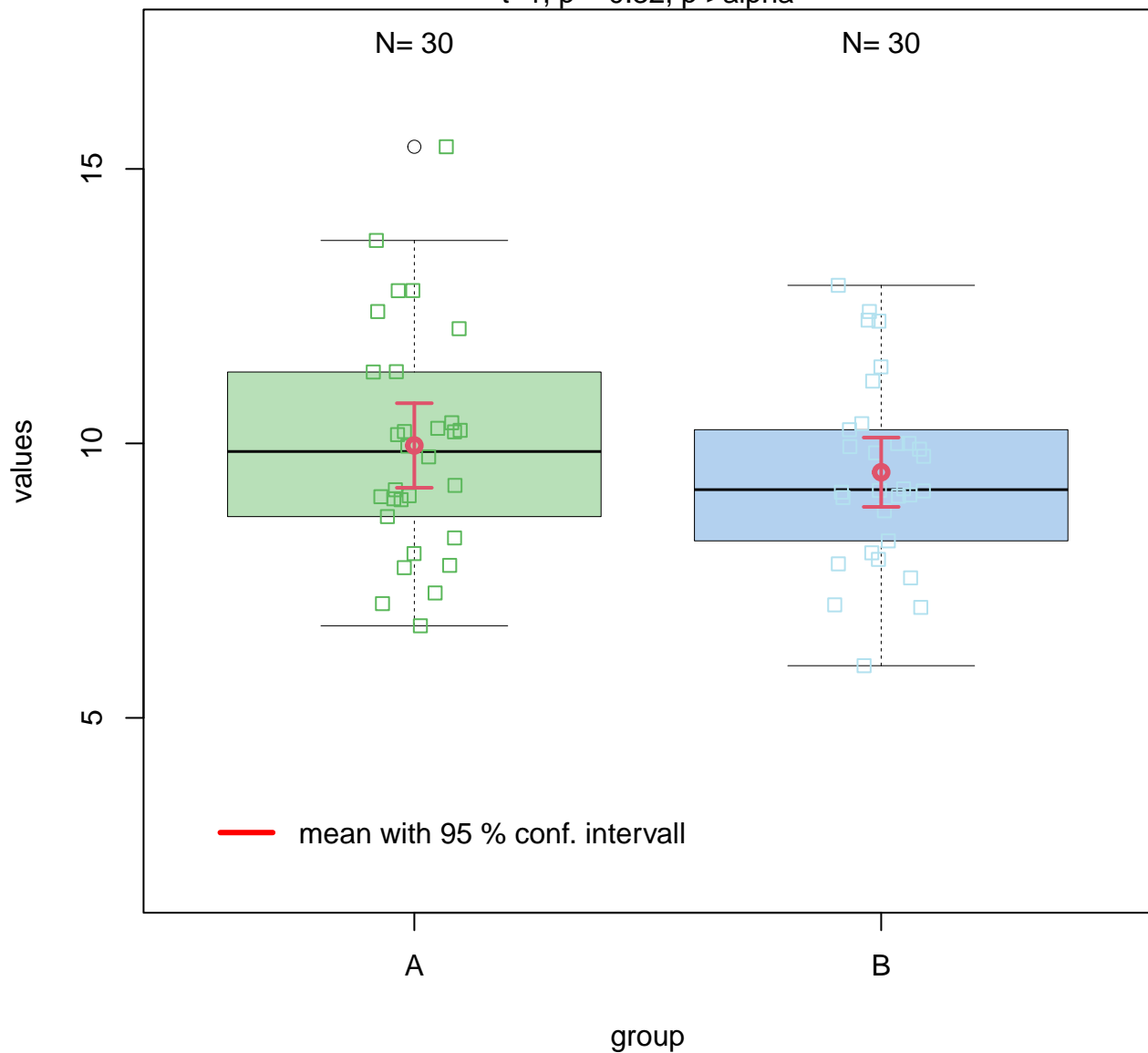


**Q-Q Plot – B**



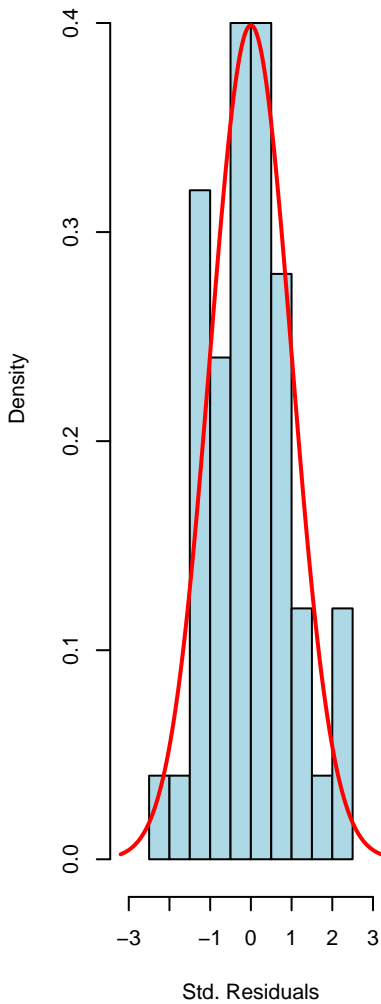
Welch Two Sample t-test,  $\alpha = 0.05$

Null hypothesis: population mean values of group "A" equals population mean values of group  
 $t=1$ ,  $p = 0.32$ ,  $p > \alpha$

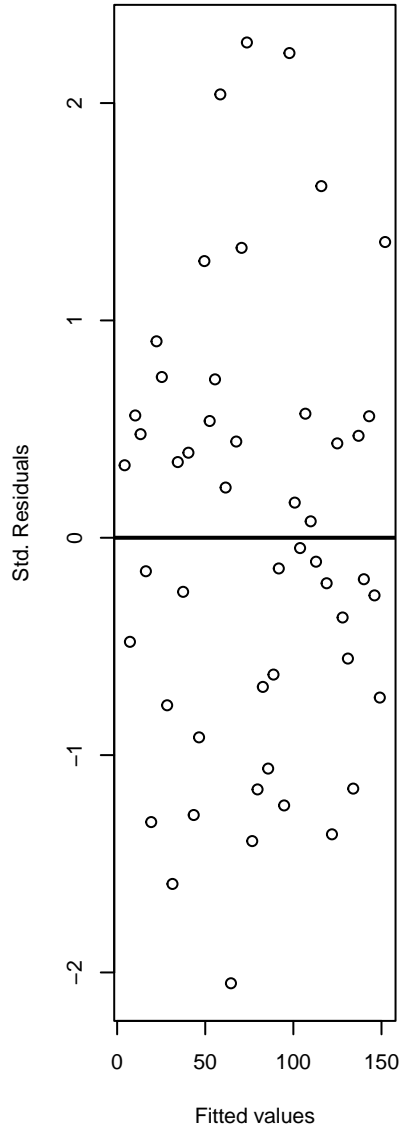


Shapiro p = 0.469 | Anderson–Darling p = 0.53

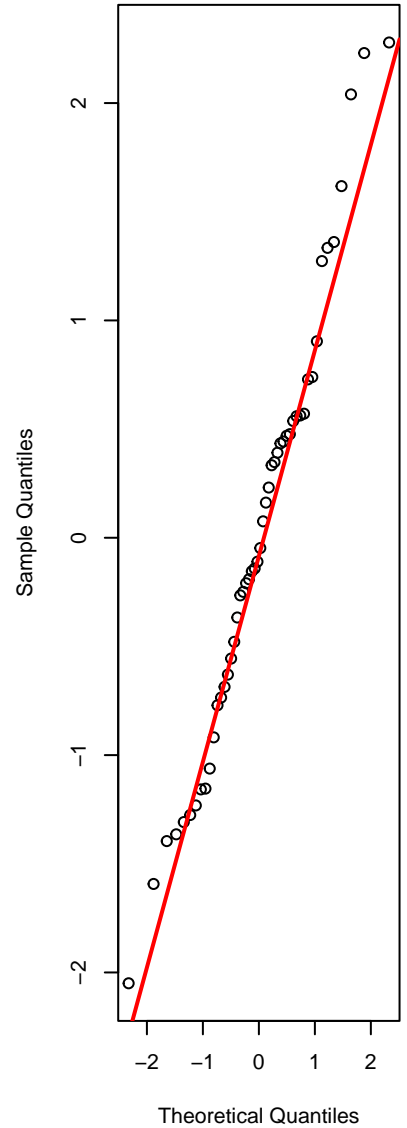
**Hist. of Std. Res.**



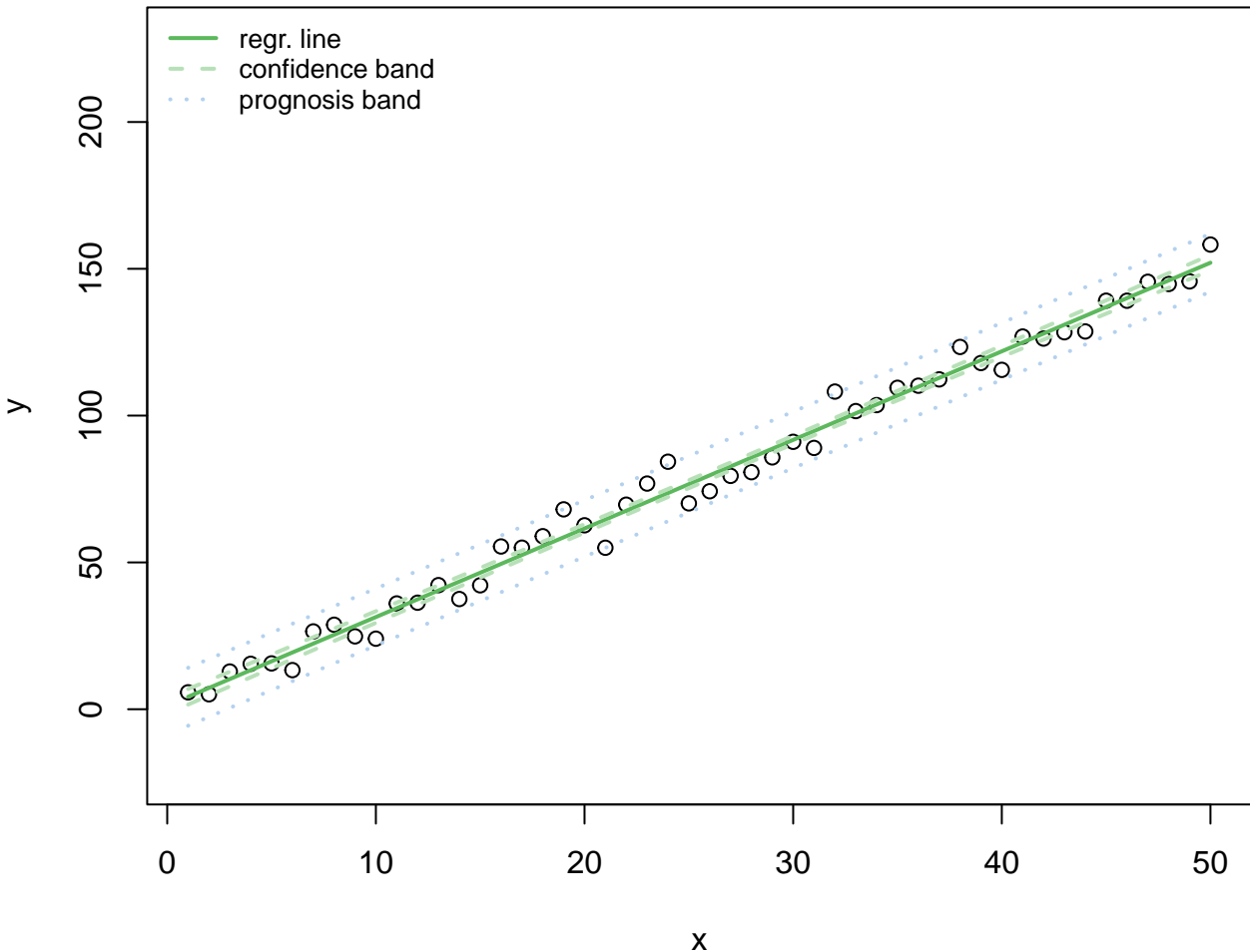
**Std. Res. vs. Fitted**



**Normal Q–Q Plot**



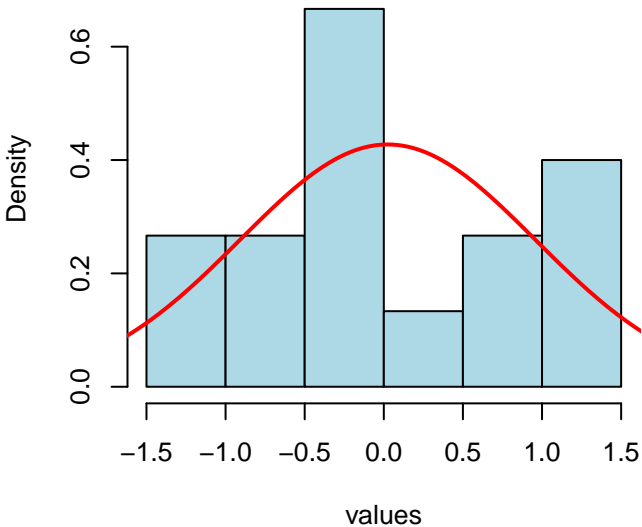
$y = a \cdot x + b$ , confidence level = 0.95 , adjusted  $R^2 = 0.99$   
slope  $a = 3$  , conf. interval [ 2.9 , 3.1 ] ,  $p = 1.7e-48$   
intercept  $b = 1.2$  , conf. interval [ -1.5 , 4 ] ,  $p = 0.37$



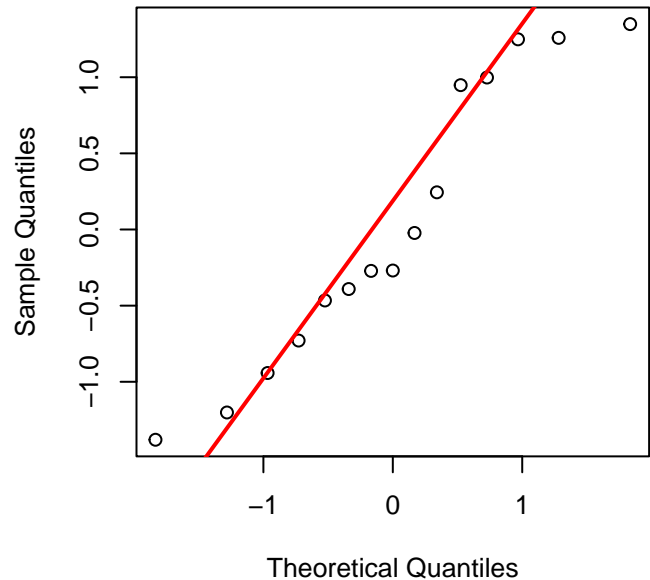
Check for normality of groups:

A – Shapiro–Wilk:  $p = 0.19$  , B – Shapiro–Wilk:  $p = 0.15$

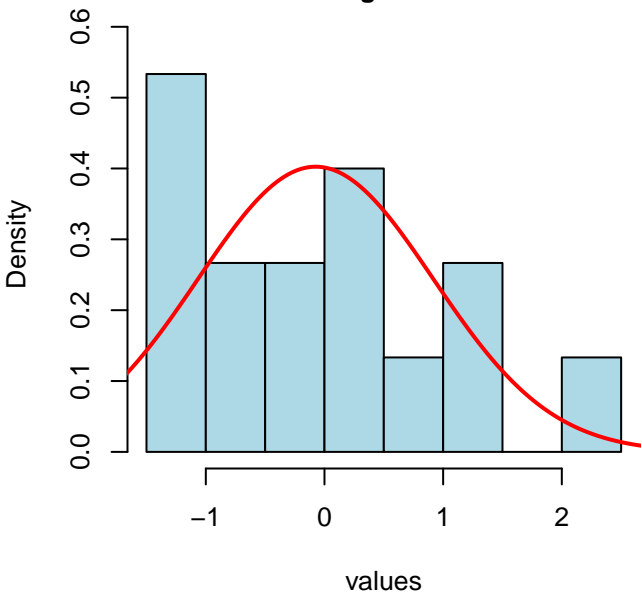
**Histogram – A**



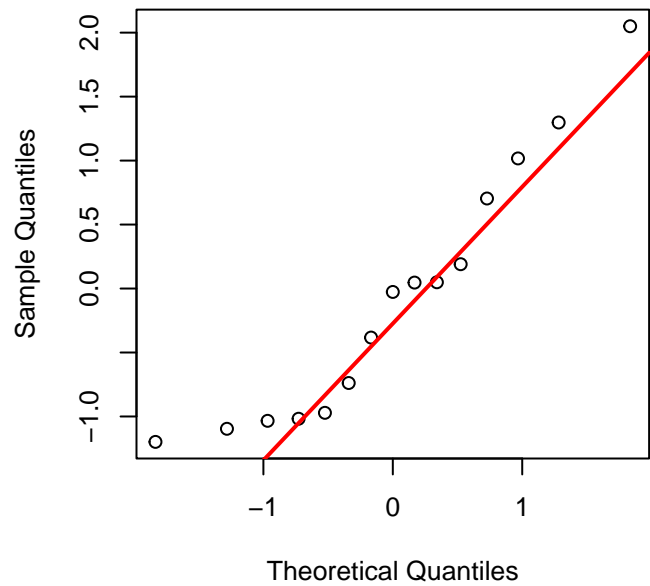
**Q-Q Plot – A**



**Histogram – B**



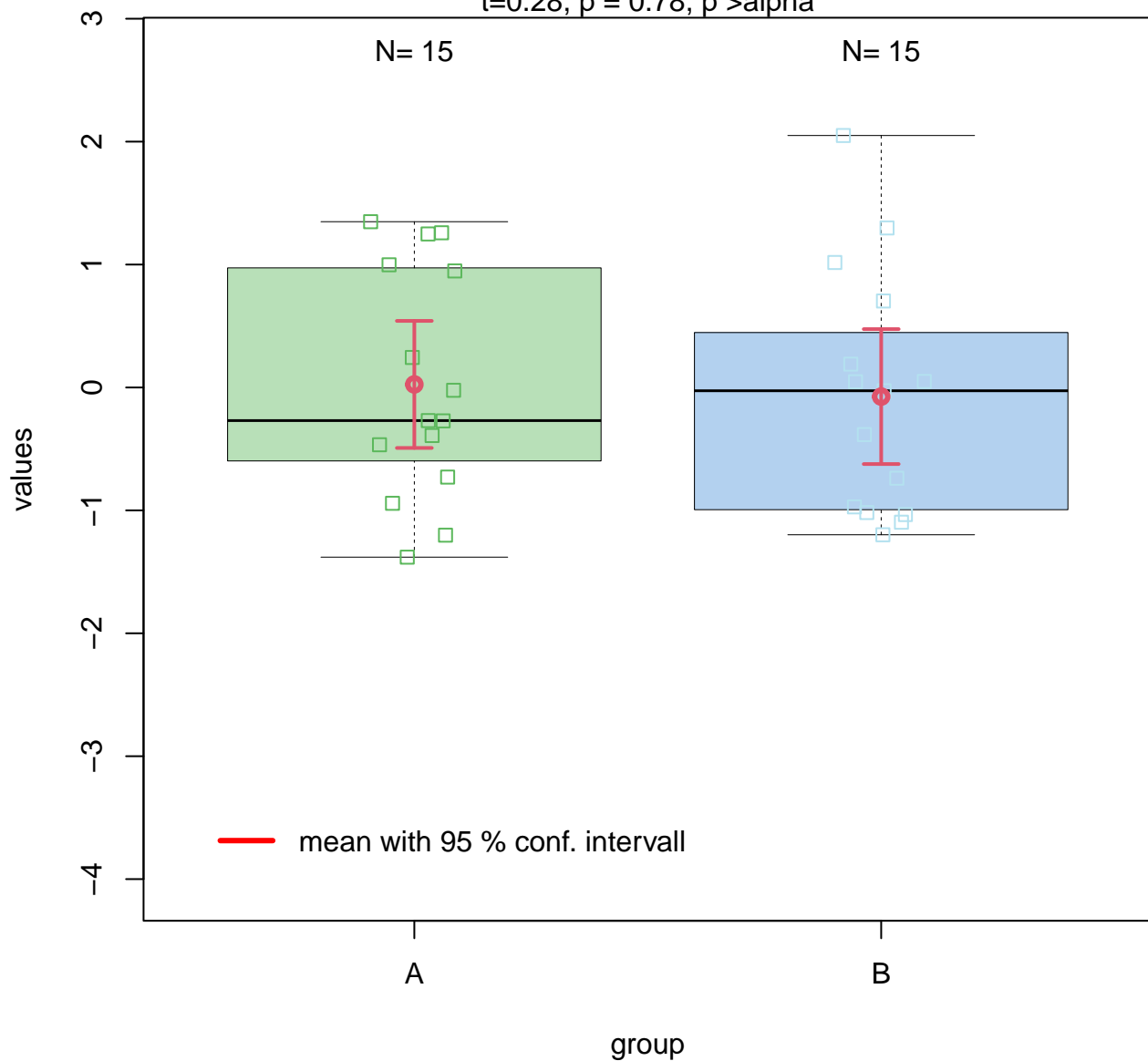
**Q-Q Plot – B**



Welch Two Sample t-test,  $\alpha = 0.05$

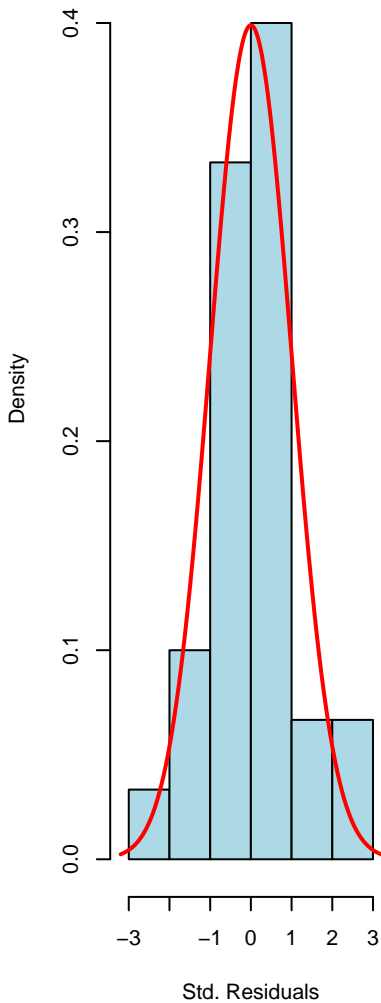
Null hypothesis: population mean values of group "A" equals population mean values of group

$t=0.28$ ,  $p = 0.78$ ,  $p > \alpha$

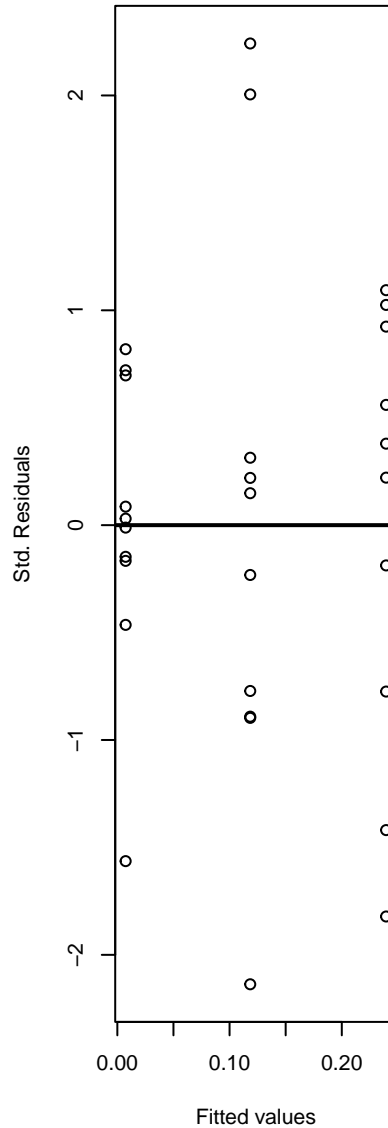


Shapiro p = 0.826 | Anderson-Darling p = 0.672  
Levene-Brown-Forsythe p = 0.252 | Bartlett p = 0.185

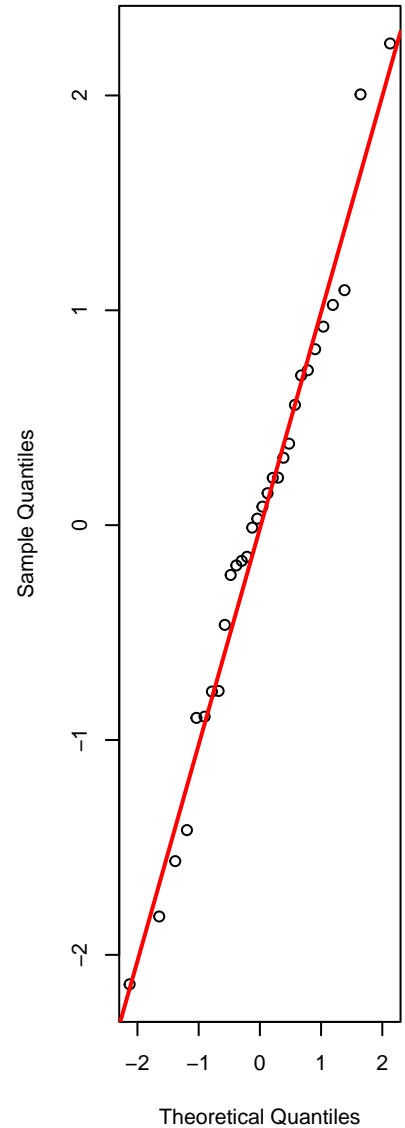
**Hist. of Std. Res.**



**Std. Res. vs. Fitted**



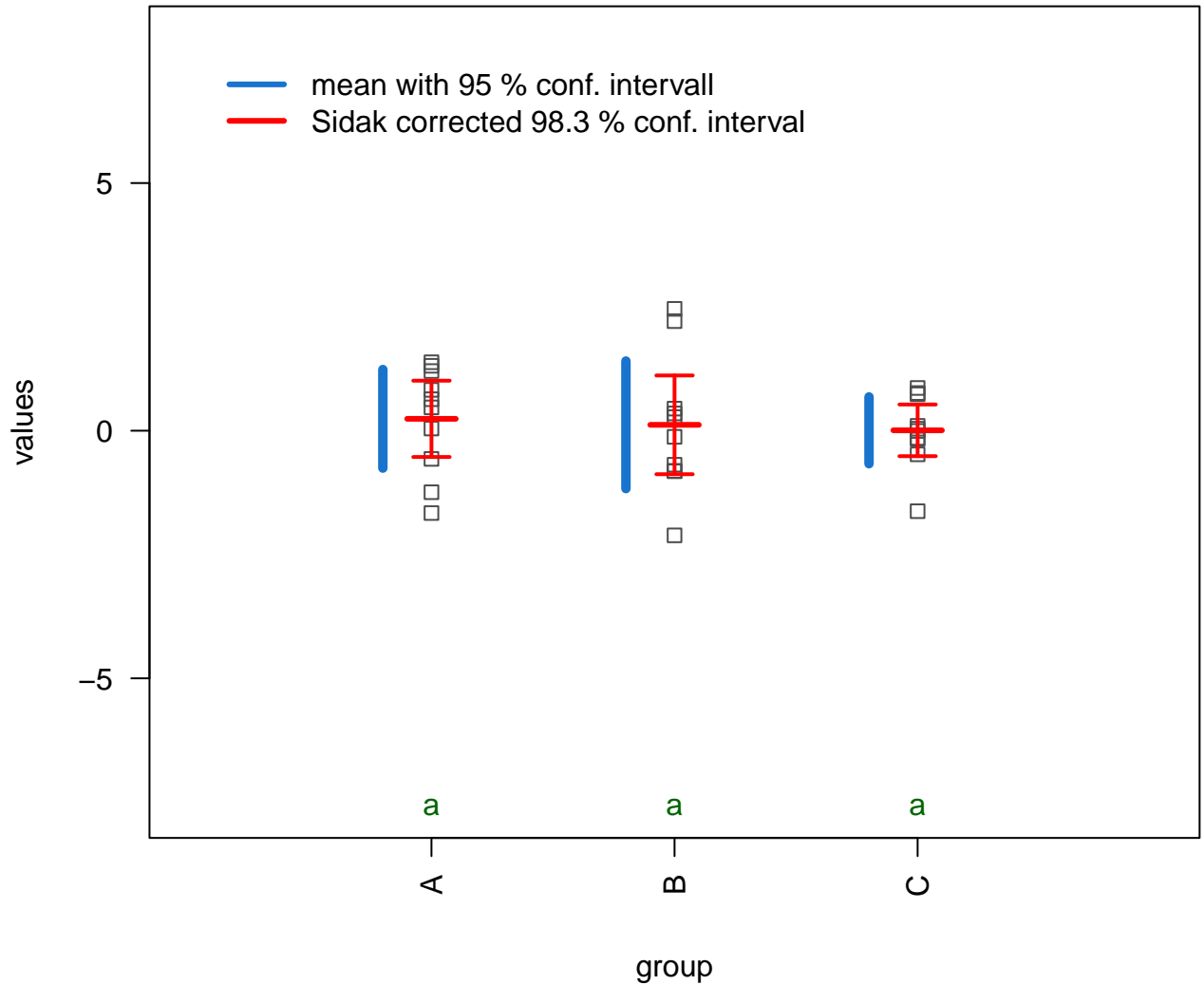
**Normal Q-Q Plot**





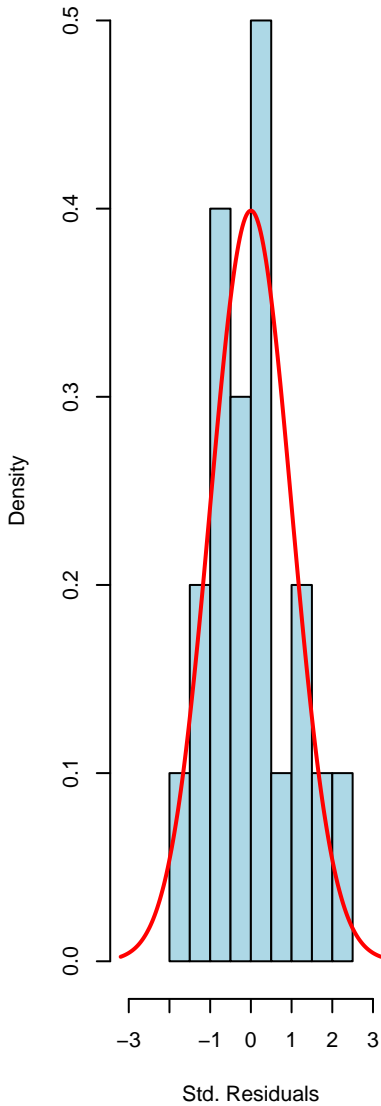
# Fisher's one-way ANOVA

$F = 0.11$ ,  $p = 0.9$

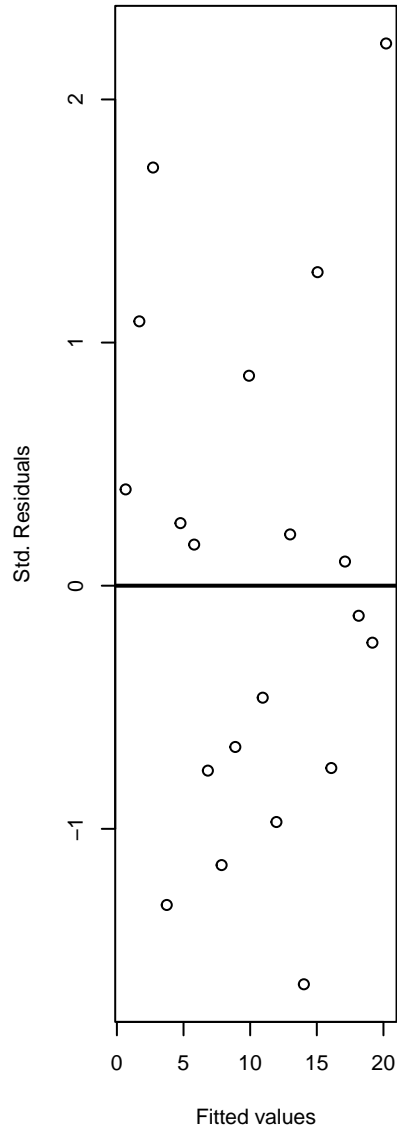


Shapiro p = 0.79 | Anderson–Darling p = 0.812

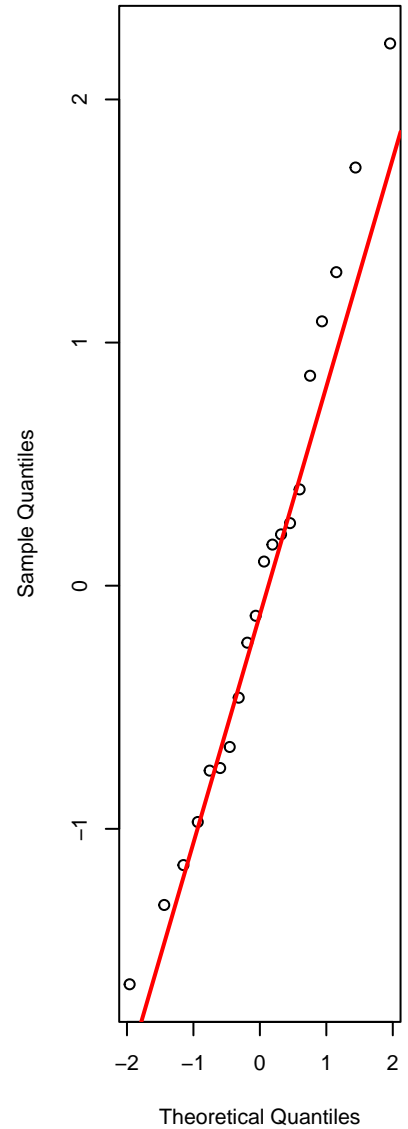
**Hist. of Std. Res.**



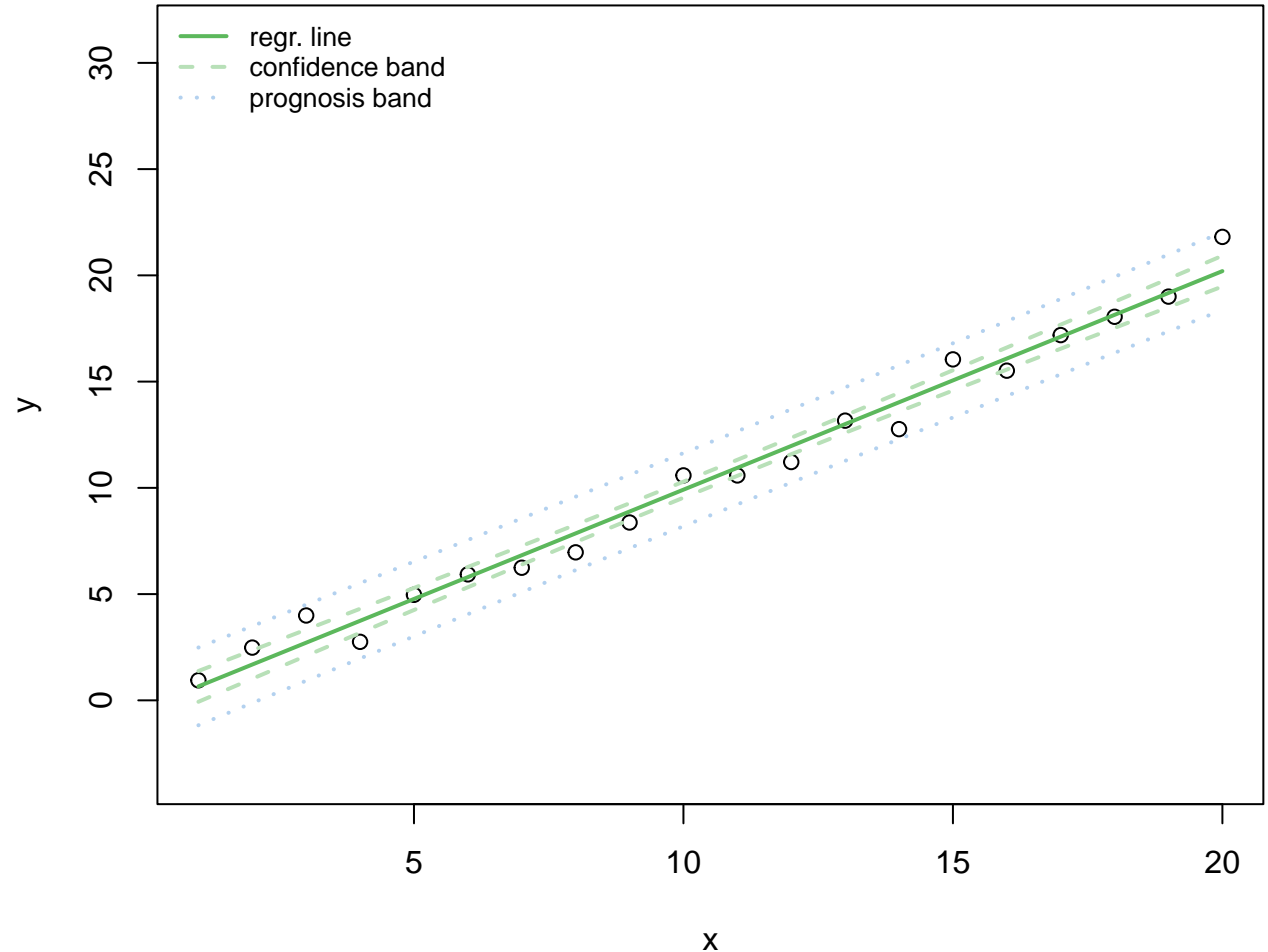
**Std. Res. vs. Fitted**



**Normal Q–Q Plot**



$y = a \cdot x + b$ , confidence level = 0.95 , adjusted  $R^2 = 0.98$   
slope  $a = 1$  , conf. interval [ 0.96 , 1.1 ] ,  $p = 1.4e-17$   
intercept  $b = -0.37$  , conf. interval [ -1.2 , 0.41 ] ,  $p = 0.33$



Pearson's Chi-squared test with Yates' continuity correction

Chi-squared = 0, p-value = 1

