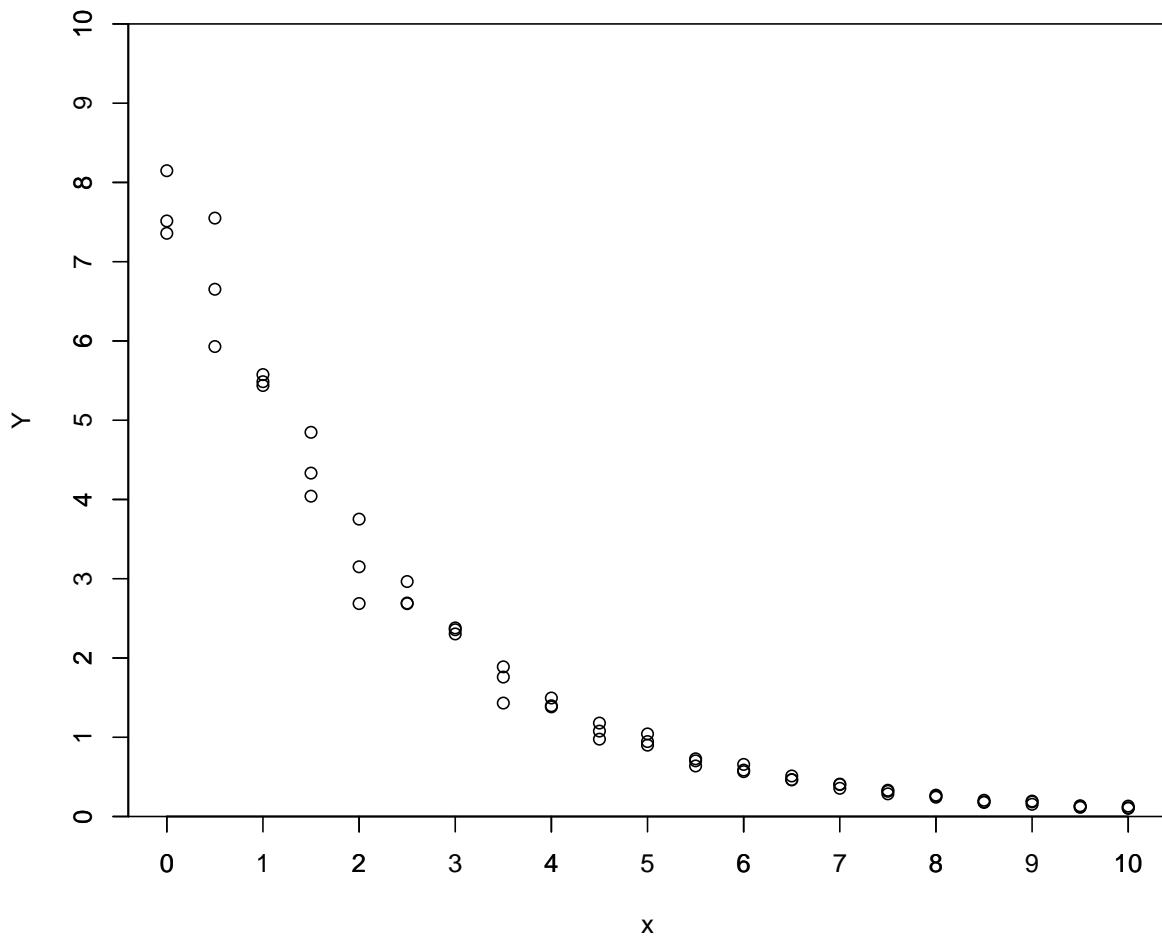## Model

According to theory there is a relationship of the form

$$y \approx \alpha + \gamma \, e^{-x/\beta}$$

between y and x.

Data

Computer-Output

```
Formula: y ~ alpha + gamma * exp(-x/beta)

Parameters:
      Estimate Std. Error t value Pr(>|t|)
gamma  8.03148    0.11532  69.642   <2e-16 ***
beta   2.42388    0.08827  27.458   <2e-16 ***
alpha -0.06694    0.07309  -0.916    0.363
---
Signif. codes:  0 *** 0.001 ** 0.01 * 0.05 . 0.1   1

Residual standard error: 0.253 on 60 degrees of freedom
```
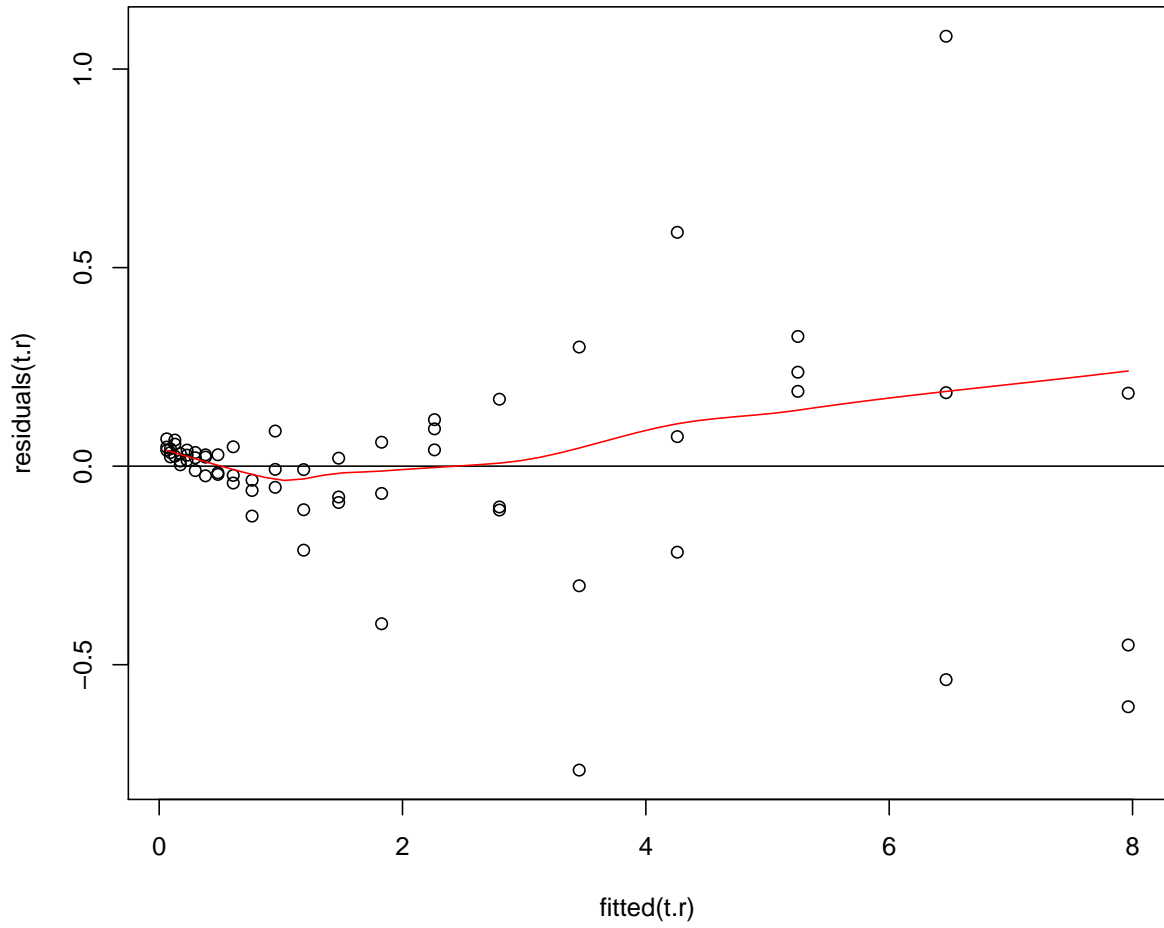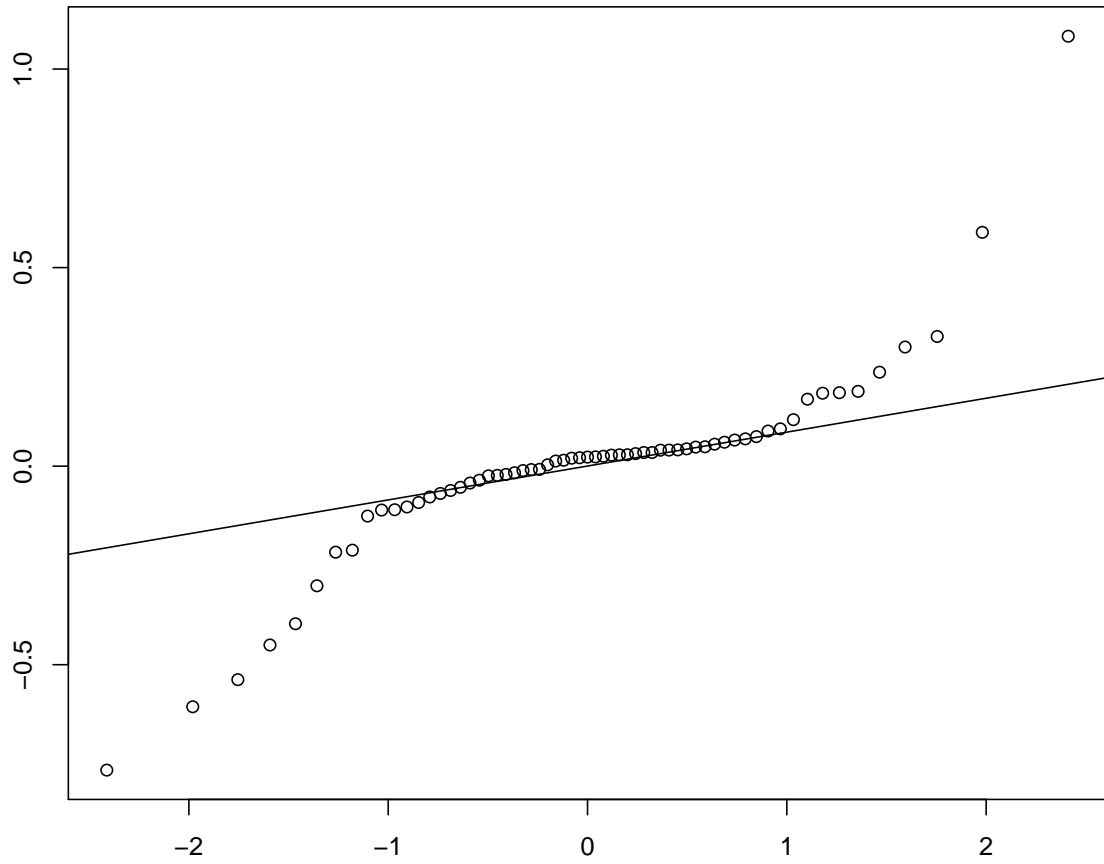
Tukey-Anscombe plot

QQ–plot

Computer-Output

```
Call:
lm(formula = log(y) ~ x, data = t.d)

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept)  2.081824   0.021639   96.21   <2e-16 ***
x           -0.432240   0.003702 -116.76   <2e-16 ***
---
Signif. codes:  0 *** 0.001 ** 0.01 * 0.05 . 0.1   1

Residual standard error: 0.08896 on 61 degrees of freedom
Multiple R-squared:  0.9955,Adjusted R-squared:  0.9955
F-statistic: 1.363e+04 on 1 and 61 DF,  p-value: < 2.2e-16
```
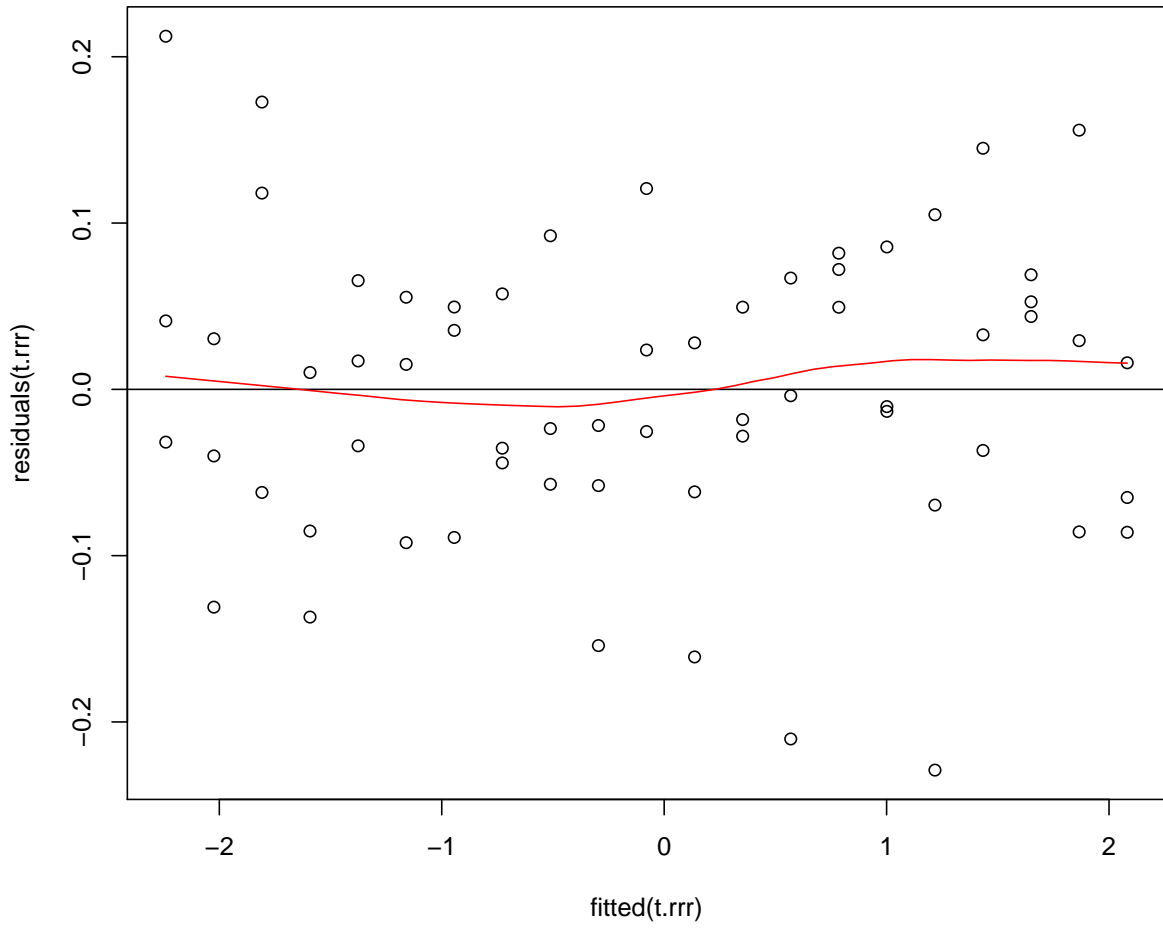
Tukey-Anscombe plot

QQ–plot

Normal Q–Q Plot