

Příloha č. 3 – Výpočet lineárního modelu

```
> k9<-glm.nb(Napadeno_p~Vek_kat+voda+Zakmeneni_LHP+voda:Zakmeneni_LHP, data=K19)
```

```
> anova(k9)
```

Analysis of Deviance Table

Model: Negative Binomial(3.0341), link: log

Response: Napadeno_p

Terms added sequentially (first to last)

	Df	Deviance	Resid. Df	Resid. Dev	Pr(>Chi)
NULL			26	52,470	
Vek_kat	2	8,1927	24	44,278	0,01663 *
voda	1	0,6416	23	43,636	0,42314
Zakmeneni_LHP	3	2,8143	20	40,822	0,42115
voda:Zakmeneni_LHP	2	8,5082	18	32,314	0,01421 *

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```
> summary(k9)
```

Call:

```
glm.nb(formula = Napadeno_p ~ Vek_kat + voda + Zakmeneni_LHP +  
voda:Zakmeneni_LHP, data = K19, init.theta = 3.034105698,  
link = log)
```

Deviance Residuals:

Min	1Q	Median	3Q	Max
-3.3468	-0.7410	-0.0172	0.4281	1.9552

Coefficients: (1 not defined because of singularities)

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	3,77527	0,29183	12,936	< 2e-16 ***
vek_kat2	0,03879	0,41308	0,094	0,92519
vek_kat3	0,42122	0,30510	1,381	0,16740
voda0	-0,99138	0,46436	-2,135	0,03276 *
Zakmeneni_LHP7	-1,10846	0,53357	-2,077	0,03776 *
Zakmeneni_LHP8	-0,53808	0,36662	-1,468	0,14219
Zakmeneni_LHP9+	0,46261	0,74488	0,621	0,53457
voda0:Zakmeneni_LHP7	2,28643	0,75280	3,037	0,00239 **
voda0:Zakmeneni_LHP8	NA	NA	NA	NA
voda0:Zakmeneni_LHP9+	0,69771	0,79822	0,874	0,38207

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for Negative Binomial(3.0341) family taken to be 1)

Null deviance: 52.470 on 26 degrees of freedom
Residual deviance: 32.314 on 18 degrees of freedom
AIC: 261.9

Number of Fisher Scoring iterations: 1

Theta: 3.034
Std. Err.: 0.961

2 x log-likelihood: -241.899

```
> 52.470/(52.470+32.314)  
[1] 0.6188668
```