

Term Test model Answers

Q1. That the 3-factor int is zero
(interacts between any two factors don't depend on the third) 1

Q2 mean response at level 1 ^{decreases} ~~increases~~ by .48346

at level 2 decreases by .78219

at level 3 decreases by 1.06219 2

Q3 multiplied by $e^{0.3} = 1.349859$ 2

Q4 $-57.375 + 32.588 \times 1.6907 = \frac{-2.278486}{\cancel{1.65089}}$ 2
 $1 / (1 + \exp(2.278486)) = 0.92922$

Q5 $1.65089 \pm 0.1747074 \times 1.959964$

i.e. (1.308, 1.993)

Q6 Yes, since interaction is insignificant same for odds. 2

Q7 Compare residual & null deviances no significant effect for any variable. ($p = .3911629$) 2

Q8 ^{Counts}
 $\sim A \times B + B \times C + A \times C$ 2

Q9 Condition on victim, DP & dependents race
 (since def. dp = 3 for zero) on independent. 2

Q10

model 1 : counts $\sim A * B * C$

model 2 : counts $\sim A + B * C$

2.