R: Homework #3, problem 2: Summary Table

1. (b) (c) (d) (e)

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(Intercept) 150.06 \*\*\* 150.06 \*\*\* 62.59 \*\*\*

 (0.40) (0.40) (1.43)

math 0.58 \*\*\*

 (0.01)

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AIC 51258.13 48357.83 51495.01 51495.01 8490.37

Deviance (-2lnlike) 60061.8 48061.8 51489.0 51489.0 48482.2

Var: idschool (Intercept) 20.95 20.95 6.02

Var: Residual 78.6 52.0 78.58 78.58 52.23

Number estitimated parms 147 148 3 3 4

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\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05

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 (f) (g) (h) (i) (j)

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(Intercept) 150.22 \*\*\* 150.04 \*\*\* 14.09 \* 14.23 \* 14.24 \*

 (0.22) (0.40) (5.92) (5.95) (5.98)

ocmath 0.58 \*\*\*

 (0.01)

school.center.math 0.57 \*\*\* 0.57 \*\*\* 0.55 \*\*\* ( 0.01) (0.01) (0.01)

school.math 0.90 \*\*\* 0.90 \*\*\* 0.90 \*\*\*

 (0.04) (0.04) (0.04) grade4 0.93 \*\*\*

 (0.20)

gendergirl -1.12 \*\*\*

 (0.17)

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AIC 48490.37 48654.76 51275.23 48436.40 48377.70

Deviance 48482.4 48646.8 51267.2 48426.4 48363.7

Var: idschool (Intercept) 6.02 21.68 3.05 3.72 3.76

Var: Residual 52.23 52.20 78.62 52.23 51.75

Number estimated parms 4 4 4 5 7

=================================================================================================\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05

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 (k) (l)

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(Intercept) 14.74 \* 14.93 \*

 (6.04) (6.16)

school.math 0.89 \*\*\* 0.90 \*\*\*

 (0.04) (0.04)

school.center.math 0.55 \*\*\* 0.55 \*\*\*

 (0.01) (0.01)

gradef4 0.92 \*\*\* 0.93 \*\*\*

 (0.20) (0.20)

gendergirl -1.12 \*\*\* -1.12 \*\*\*

 (0.17) (0.17)

gen\_shorta\_lot 0.97

 (1.00)

gen\_shortnone 0.89 \*

 (0.43)

gen\_shortsome 0.93

 (0.63)

shortages -0.10

 (0.23)

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AIC 48378.96 48379.49

Deviance 48359.0 48363.5

Var: idschool (Intercept) 3.63 3.76

Var: Residual 51.75 51.75

Number estimated parameters 7 7

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\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05