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Business Intelligence & Consumer Insights- Professor Kovtun

HW #4

**1 (a)**

y x1 repIND demIND

1 10 Republican 1 0

2 8 Republican 1 0

3 5 Democrat 0 1

4 3 Independent 0 0

5 8 Democrat 0 1

6 5 Independent 0 0

7 10 Democrat 0 1

8 2 Independent 0 0

y = α + β1\*repIND + β2\*demIND + €

y = 3.333 + 5.667\*repIND + 4.333\*demIND (got from part b)

**1 (b)**

(Intercept) repIND demIND

3.333 5.667 4.333

y = 3.333 + 5.667\*repIND + 4.333\*demIND

**1 (c)**

Being a republican would impact the prediction by 5.667 as opposed to democrat, which would 4.333 (the difference would be an increase by 1.334)

**1 (d)**

Being a democrat would impact the prediction by 4.333 as opposed to independent which would be 0 (the difference would be an increase by 4.333)

**1 (e)**

47

**1 (f)**

3.3125

**2 (a)**

Increase by 3

**2 (b)**

Increase by 3

**2 (c)**

Increase by 3

**2 (d)**

Increase by 77

**2 (e)**

Increase by 157

**3**

Log seems to be the best transformation for x1. The data in x2 seems to have no relationship to y so transformations would not be helpful.