Quiz 7

1.

a.

With the help of Dummy Variables, we can turn the categorical data into numeric variables/indicator variables. This allows use to use a multiple regression problem.

b.

The null hypothesis for the model is that the lightbulb brand has no effect on the lifetime of the lightbulbs. The alternative hypothesis for the model is that at least two of the lightbulb brands produce different means for the lifetimes of the lightbulbs.

c.

The F ratio is 15.62 and the p – value is 7.599**e-06**

(the independent variable left out was the brand generic)

d.

Hours = 2.1 + .23571 \* **GE** – 0.1 \* **Dot** - .31286 \* **West**

e.

GE = 2.3357

Dot = 2

West = 1.787143

f.

A screenshot of a cell phone

Description automatically generated