Midterm Question 2

Parsa Yadollahi
260869949
MATH 208 - Midterm

Question 2

```
# a)
# The plots that apply are
# A = ggplot(the_data,aes(x=qual,y=quant)) + geom_point()
# B = ggplot(the_data,aes(x=quant)) + geom_bar() + facet_wrap(~qual)
# D = ggplot(the_data,aes(x=quant)) + geom_hist() + facet_wrap(~qual)
# G = ggplot(the_data,aes(x=qual,y=quant)) + geom_boxplot()
```

```
# (b)

# (i)
# The added code is ‘ + facet_wrap(~location)‘

# (ii)
# The more mileage on a vehicle the less the price. These two variables
# are correlated since because we can see a downwards trend in price when
# the car increases in mileage. I.e. There is a negative correlation.

# (iii)
# Yes, we can see from the graphs drawn that this downward trend is not
# dependent on location. Each location has a similar trend where the price
# of the car decreases when the mileage increases.
```

```
# (c)

# (i)
# A similar plot that would represent the data would be a Mosaic graph

# (ii)
# The best plot to compare distributions of models across locations is
# the on panel (d) since this plot uses relations between the total number of cars and
#  the  car model instead of simply using the quantity of cars

# (iii)
# Yes, Based on the plot we can see that the relative proportions of models are similar
# across locations. We can clearly see this in panel (d)
```