PG 226 Chapter 4 Review

2. a. Fat Content
   b. Scatter Plot
   c. r = 0.944
   d. Yes, a strong positive relationship

3. a. Scatter Plot
   b. Queens: r = 0.9093
      Nassau: r = 0.8674
   c. Yes d. yes

5. a. $\hat{y} = 2.2091x - 34.315$
   b. For every sq ft rent increases $2.21.
      Not appropriate to interpret the y-intercept
   c. $1250 < 1788.19 so "below average"

6. a. Scatter Plot
   b. answers will vary
   c. See Scatter Plot
   d. $\hat{y} = -3.8429x + 145.49$
   e. See Scatter Plot
   f. Answers will vary
   g. 16.271
   h. The regression equation from (d) is best

7. $R^2 = 0.891$
   89% of Calories are due to fat cotent.

8. $R^2 = 0.827$
   83% of the cost of rent is due to the sq footage.

10. a. 203

b.

	New	Used	Total
Not to satisfied	11	25	.091
Pretty satisfied	78	79	.396
Extremely satisfied	118	85	.513
Total	.523	.477	1

c. 51.3%

(14) a) I do not - there are not enough of the high proportion of low income data points to make this kind of statement (poorer schools have shorter days)

b.) $m = \frac{-0.0102}{1} \frac{\text{Length of school day}}{\text{1 percent of Low income}} = .612$ minut

-0.0102 hrs. $= .612$ minutes $= 36.72$ seconds

slope: Length of school day decreases 36.72 seconds per 1 percent increase of low income students

y-intercept: For a population of 0% low income students a school day would be 7.11 hrs.

c.) $\hat{y} = -0.0102x + 7.11$

$\hat{y} = -0.0102(20) + 7.11$

$\hat{y} = 6.906$ hrs.

d.) Both the scatter plot and r-value indicate that there is only a moderate strength pos relationship between Length of school Day and PSAE. It certainly plays a part but not a significant part. I would also consider other factors

e) Yes, more than the other pairs of variables

f.) Yes, several

- family dynamics
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