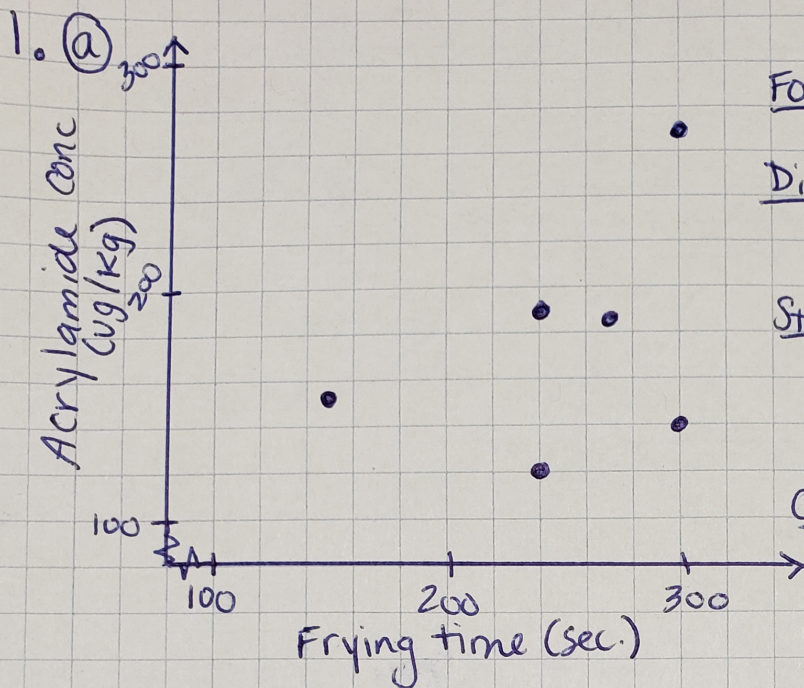


# Review Sheet Ch. 3 Key



Form: Scatterplot is roughly linear

Direction: Scatterplot has a positive association between Frying time and Acrylamide conc.

Strength: Association between variables is relatively weak with a correlation value of  $r = .379$

Outliers: There does ~~not~~ seem to be an influential point in the y-direction at the data value of 300 seconds of fry time and 270 acrylamide conc.

(b)  $\hat{y} = 86.923 + .359x$

↑ Predicted Acrylamide conc.      ↑ Frying time

(c) The point (300, 270) is an influential point in the y-direction because it will dramatically change the regression line and correlation values.

If this point is removed then the regression line would be  $\hat{y} = 158 + 0x$ , changing the slope to zero, and the correlation would also become 0 saying that there is ~~relatively~~ relatively no association between these two variables.

2. (a)  $\hat{y} = -.209 + .029x$        $r = .817 \sim .82 \checkmark$

↑ Predicted Fatality Rate      ↑ Age

(b) (1) Scatterplot has nonlinear pattern - curved (exponential)

(2) Residual plot has a clear curved pattern, confirming the original relationship is not linear →

While the correlation value is closer to 1, the scatterplot and residual plot clearly show a nonlinear relationship, so the LSRL is ~~not~~ good.