1. Using the fast food study data we will explore which variables affect the starting wage after the introduction of the law regulating minimal wage.

   Variables used are:
   Wage_st2 - wage after introduction of the new law
   Wage_st - wage before the introduction of the law
   Pfry2 - Price of medium fries
   Psoda2 - Price of medium sized soda
   HRSOPEN2 - Opening hours per day (after introduction of the law)

   The following tables show output from a linear regression analysis.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.300[a]	.090	.078	.2461

a. Predictors: (Constant), PFRY2, WAGE_ST, HRSOPEN2, PSODA2

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.906	4	.477	7.867	.000[b]
	Residual	19.322	319	.061		
	Total	21.229	323			

a. Dependent Variable: WAGE_ST2

b. Predictors: (Constant), PFRY2, WAGE_ST, HRSOPEN2, PSODA2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.004	.273		14.677	.000
	WAGE_ST	.075	.048	.083	1.554	.121
	HRSOPEN2	-.012	.005	-.130	-2.328	.021
	PSODA2	.460	.184	.169	2.499	.013
	PFRY2	.359	.160	.155	2.239	.026

a. Dependent Variable: WAGE_ST2

   (a) State the Multiple Linear Regression Model implied by the output.

   (b) Assess the usefulness of the model by interpreting R^2 and the adjusted R^2

   (c) Asses the usefullness of the model by conducting a model utility test.

   (d) State the estimated regression function.

(e) Do the data provide sufficient evidence that the opening hours have an effect on the starting wage when correcting for the other variables in the model.

(f) Provide a 95% confidence interval for the slope of the price of fries. Interpret.

(g) The slope for opening hours is negative, interpret.

(h) Would this be a good model to predict the starting wage for an employee at a fast food outlet at the time the data was collected? Explain.

(i) What is measured by the standard deviation of the model, and what would be an estimate for it based on the output.

(j) Explain what it would mean if in a similar model opening hours and chain (McDonalds, Burger King, KFC, etc.) would interact in their effect on the starting wage. You might want to sketch a graph to help your explanation.