

Commonly Asked Regression Questions

(As seen on the AP Statistics Exam--can be used with any bivariate data set.)

1. Describe the association in context.
2. Is a linear model appropriate to describe this relationship? Explain.
3. Write the equation for the linear model on this data.
4. Explain the meaning of the slope in this linear model.
5. Explain the meaning of the y-intercept in this linear model.

6. Find the value and explain the meaning of the correlation coefficient.

7. Find the value of and interpret r-squared.

8. a. Using the linear model, predict _____ when _____ is _____.

b. Is the residual for this data point positive or negative? Is the model over- or underestimating? Explain.

9. Comment on any outliers present. Fully describe their effect on the analysis, if any.

McDonald's Menu Items

Random sample of 20

Item	Fat (g)	Calories
Cappuccino with Sugar Free Vanilla Syrup (Large)	8	25
Vanilla Latte (Large)	9	30
Hotcakes and Sausage (w/o Syrup & Margarine)	24	50
Coca-Cola® Classic (Child)	0	0
Big N' Tasty® with Cheese	28	85
Nonfat Hazelnut Latte (Small)	0	5
Southern Style Crispy Chicken Sandwich	17	45
Iced Coffee-- Vanilla (Small)	5	20
Iced Coffee-- Caramel (Medium)	8	30
Iced Nonfat Hazelnut Latte (Small)	0	0
Sugar Packet	0	0
Chicken Selects® Premium Breast Strips (5 pc)	40	85
Nonfat Cappuccino (Small)	0	5
Hot Chocolate with Nonfat Milk (Small)	5	10
Premium Southwest Salad with Grilled Chicken	9	70
Spicy Buffalo Sauce	7	0
Iced Mocha (Medium)	13	25
Iced Nonfat Latte (Large)	0	5
Sweet & Sour Sauce	0	0
Hazelnut Cappuccino (Medium)	6	20

