Week 6 ADDENDUM – Homework/Quiz Review

These are some additional notes that might help with the homework and quiz.

1. You can skip #16 in the homework and #9 and #10 in the quiz. Everyone will be given credit. The problems look something like this:

   In the regression equation, ŷ = 5.23 + 2.74x, and n = 24, the mean of x is 12.56, SS_{xx} = 55.87 and S_e = 10.71. A 90% prediction interval for y when x = 11 is ___.

2. Review definitions and concepts in the notes.

3. We are developing a regression model to predict weight as function of height.
   a. What is the explanatory variable (independent variable)? Answer: height
   b. What is the response variable (dependent variable)? Answer: weight

4. In the following regression: ŷ = 27.7 + 3.25x
   a. What is the slope? Answer: 3.25
   b. What is the y-intercept? Answer: 27.7

5. Use the following data to construct a regression model:

X	27	34	23	17	18
Y	5	14	8	2	5

   Answer: ŷ = -6.61 + 0.56x

Independent (x)   **Dependen t (y)**

27	5
34	14
23	8
17	2
18	5

Slope (β₁) y-Intercept (β₀)	0.563655
Correlation Coefficient (r)	-6.614990
Coefficient of Determination (r²)	0.864555
Standard Error	0.747456
	2.640119