Section 6: Scatterplots and Linear Models

* 1. What is the independent variable and what does it represent?
  2. What is the dependent variable and what does it represent?
  3. Describe the relationship/trend between the two variables in this graph.
  4. Write a sentence explaining the value of the slope for this regression line.
  5. Use the R2 value to determine the r value. Is this a reasonable model for the data? Why or why not?
  6. Use the **equation** to estimate the CO2 level in 2011. How does it compare to the actual value labeled in the graphic?

Use the above scatter plot to answer the following questions:

* 1. What is the independent variable and what does it represent?
  2. What is the range of the independent variable?
  3. What is the dependent variable and what does it represent?
  4. State the trend line (regression line).
  5. Write a sentence explaining the value of the slope for this regression line.
  6. Use the R2 value to determine the r value. Is this a reasonable model for the data? Why or why not?
  7. Consider the model/regression line.
     1. How would you use the **model** to predict the registration for 2005? *Note the range of the x-value.*
     2. What value does the **model** predict for the number of registrations in 2005?
     3. How does this compare to the **actual** value of 241 million?
  8. What value does the **model** predict for the number of registrations in 2020?
  9. Is it reasonable to use the **model** to make predictions for 2020? Explain your answer.