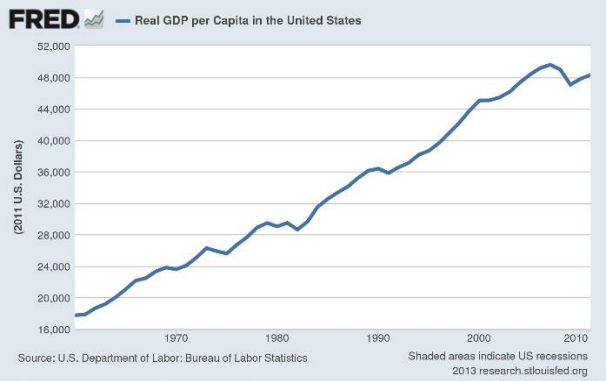
Name: _____ Date: _____

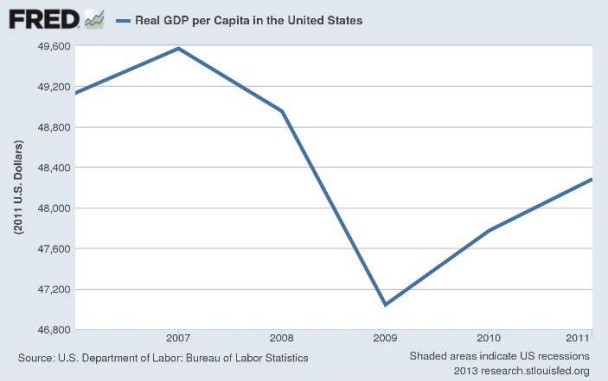
**Activity 2: Same Data? (ANSWER KEY)**

**Directions:** Each of the tables below show the real gross domestic product per capita in the United States. Review the graphs and answer the questions.

Graph A




Graph B




Graph A: http://research.stlouisfed.org/fred2/graph/?g=IGF

Graph B: http://research.stlouisfed.org/fred2/graph/?g=IGC

1. What is similar about the two graphs above**? (Sample answers: The titles of the two graphs are the same. Both graphs show real GDP per capita in the United States. The units on both Y-axes are 2011 US dollars. The units on both X-axes are years.)**

2. What is different about the two graphs above?
   **(Sample answers: The graph on the left shows a steady increase in real GDP per capita while the graph on the right seemingly shows extreme fluctuation. The scale of the graph on the left uses increments of $4,000 on the Y-axis while the one on the right uses increments of $400.The scale of the graph on the left uses increments of ten years on the X-axis while the one on the right uses increments of a year.)**

3. Why are the units on the Y-axis of each graph given as 2011 dollars and not just dollars? **(The graphs show real GDP per capita which means the data are adjusted for inflation. In this case the data have been calculated using 2011 dollars.)**

4. Do the graphs above use the same data? Explain**. (Both graphs use the same data for the last five years; however, the graph on the left has more years' worth of data.)**

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5. Explain a case in which you would use the graph on the right instead of the one on the left. **(The graph on the right would be better to use if you were trying to convince someone that real GDP per capita fluctuates greatly from one year to another. You would not want to use the graph on the left to show this because it makes real GDP per capita appear to be a steadily increasing value. )**

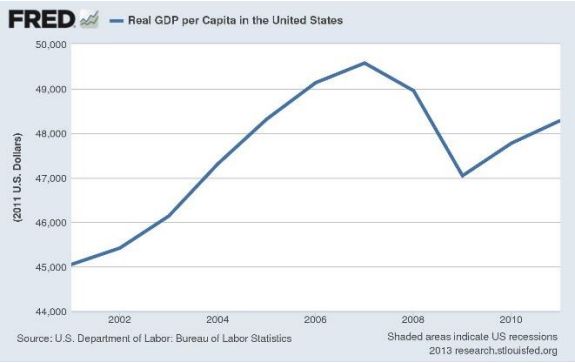
6. Using Graph A, what would you expect the real GDP per capita to be in ten years? Why? **(Assuming the real GDP per capita continues to increase at approximately the same rate, the value would be approximately $52,000 to $54,000. If the graph was extended over that time and the trend continues, you can draw a line of best fit on the graph and continue the line to the point where 2020 would be on the X-axis.)**

7. Using Graph B, what would you expect the real GDP per capita to be in ten years? Why? **(In the five years shown on the graph, the real GDP per capita dropped by approximately $1,000. Assuming this cycle repeats itself for another ten years or two cycles, the real GDP in ten years would be approximately $46,400.)**

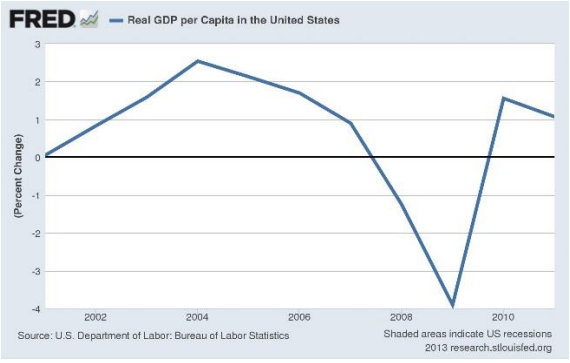
8. Are your answers to numbers 6 and 7 above the same? Explain why or why not. **(Using graph A, the answer in number six gives us a higher number because we have more years' worth of data from which to determine a trend. The data in number seven draws from graph B which has fewer years' worth of data.)**

9. Which graph would give a consumer confidence that real GDP per capita will rise over time? **(Graph A would give a consumer greater confidence because it shows a steady rise in the real GDP per capita while Graph B shows fluctuations.)**

Graph C




Graph D




Left graph: http://research.stlouisfed.org/fred2/graph/?g=IGI

Right graph: http://research.stlouisfed.org/fred2/graph/?g=IGM

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1. What is similar about the two graphs above? **(The titles of the two graphs are the same. The units on both the X-axes are years. The scale of both X-axes are the same and use the same increments and origin.)**

2. What is different about the two graphs above**? (Graph C uses 2011 U.S. dollars as the unit on the Y-axis while graph D uses percent change.)**

3. Do the graphs above use the same data? Explain. **(Yes. The graphs show the same data but in different manners.)**

4. Explain a case in which you would use the graph on the right instead of the one on the left. **(Most people look at a graph and interpret an increase in the slope of a line from left to right as meaning that the value increased. However, when you use percent change this can look different. Graph D shows much more variability than graph C.)**