

- For questions involving Excel files, email me the Excel file that shows your solution. Clearly label with appropriate headings the cells in the Excel file so I can understand your solution!

**The Excel file you submit should be your own original creation.**

Remember—when you are using Excel, use new sheets where appropriate (it is usually a good idea to leave original data unaltered in the first sheet, and make modifications on other sheets). Focus on making your Excel file easy for a reader to understand, labeling sheets in a meaningful manner, deleting unnecessary sheets or data, and use AutoShapes for text you wish to include. Also, provide headings or labels to cells that you add, and use color to improve readability.

**Problem 1.** (40 marks) **(Excel Based)** The federal minimum wage can be found here:

<http://www.dol.gov/whd/minwage/chart.htm>.

(a) Construct a graph that shows the federal minimum wage from 1938 to 2012 in 2012 dollars. To convert to 2012 dollars you should use the appropriate CPI (an all-urban all-item consumer would be appropriate, and get it for every year between 1938 and 2012). For the federal minimum wage, choose the highest value at any time from the 1938 Act and 1961 Amendments (the 1966 Amendments are lower numbers), and just deal with the years (not the months when the Amendments passed).

(b) When was the federal minimum wage the highest in 2012 dollars? What was that value in 2012 dollars?

For your information: The federal minimum wage is not the last word on minimum wages. Many states have minimum wage laws that provide a higher minimum wage than the federal. Check out <http://www.dol.gov/whd/minwage/america.htm> to see how the states compare.

**Problem 2.** (20 marks) A colleague feels he will need one million dollars to retire at age 65 and still maintain his standard of living. A younger colleague of age 30 decides to use this advice to begin saving for retirement. How much does the younger colleague need to save per month to have \$1 million at retirement if the investment fund earns a steady 3% annual interest compounded monthly? How much of the \$1 million saved will be from interest?