Problem Set 5
Economics 40656
(Practice problems)

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1. Suppose the inverse market demand and supply for labor (measured in workers) in a market is given by the equations $W_d=200 - (4/5)L$ and $W_s = 50 + (1/5)L$, respectively. Graph these curves and calculate the market clearing price and quantity. Suppose that the government decides to raise revenue by adding a $10 tax per unit of labor. Given the tax, what is the market clearing values for W and L? What are government tax revenues? How much revenues are paid by firms and how much are paid by workers? What is the dead weight loss produced by the tax?

2. Suppose the demand for labor (measured in workers) can be characterized by the inverse function $W=200-0.1L$ while the labor supply can be described by the function $W=50+0.15L$. In this instance W is the wage paid per day per worker. What is the market clearing wage and equilibrium level of employment? Suppose that because of government mandates, the daily cost of employing a worker increases by $10. If the workers do not value the new services mandated by the government, what would happen to equilibrium level of daily wages and employment? After the mandates, what does it cost the firm to hire a worker for a day? How do your answers change if the workers value the newly mandated benefits at $5/day?

3. Suppose in a particular industry all workers receive health insurance through their employer and the industry is in long run equilibrium. Suppose that over time, health car costs increase and therefore, the cost of providing insurance to workers has increased. In a market graph with wages on the vertical axis and employees on the horizontal axis, graphically illustrate what will happen to market equilibrium if health insurance costs increase.

4. If you divide what General Motors spends on employer-sponsored health insurance each year by the number of cars it makes, you find that GM spends roughly $1500 in health insurance per every car manufactured. Some industry analyst argue that such large health care costs force GM to jack of the price on their cars and put GM at a 'competitive disadvantage.' Using what you've learned in this section of the class, please evaluate this claim. Do high health car costs adversely impact the price of GM automobiles?

5. Suppose that firms can hire two types of workers: full time and part-time workers. Originally assume that the workers in these markets do not receive health insurance from their employers. Graph the markets for full and part time workers and assume the markets are initially in equilibrium. Suppose that the Federal government mandates that firms must offer health insurance to their full-time workers. Graphically illustrate how will this impact the market for full and part-time workers.