

Problem Set Nine

Name _____

Chapter 13

1. Mountain Breeze supplies air filters to the retail market and hires workers to assemble the components. An air filter sells for \$26, and Mountain Breeze can buy the components for each filter for \$1. Sandra and Bobby are two workers for Mountain Breeze. Sandra can assemble 60 air filters each month, and Bobby can assemble 70. If the labor market is perfectly competitive, how much will Sandra and Bobby be paid?

2. Stone, Inc., owns a clothing factory and hires workers in a competitive labor market to stitch cut denim fabric into jeans. The fabric required to make each pair of jeans costs \$5. The company's weekly output of finished jeans varies with the number of workers hired, as shown in the following table:

| Number of workers | Jeans (pairs per week) | MP (pairs per worker) | VMP (\$/wk) |
|-------------------|------------------------|-----------------------|-------------|
| 0 | 0 | | |
| 1 | 25 | | |
| 2 | 45 | | |
| 3 | 60 | | |
| 4 | 72 | | |
| 5 | 80 | | |
| 6 | 85 | | |

a. If the jeans sell for \$35 a pair, and the competitive market wages is \$250 per week, how many workers should Stone hire? How many pairs of jeans will the company produce each week?

b. Suppose the Clothing Workers Union now sets a weekly minimum acceptable wage of \$230 per week. All the workers Stone hires belong to the union. How does the minimum wage affect Stone's decision about how many workers to hire?

c. If the minimum wage set by the union had been \$400 per week, how would the minimum wage affect Stone's decision about how many workers to hire?

d. If Stone again faces a market wage of \$250 per week but the price of jeans rises to \$45, how many workers will the company now hire?

6. Jones, who is currently unemployed, is a participant in three means-tested welfare programs: food stamps, rent stamps, and day care stamps. Each program grants him \$150 per month in stamps, which can be used like cash to purchase the good or service they cover.

a. If benefits in each program are reduced by 40 cents for each additional dollar Jones earns in the labor market, how will Jones's economic position change if he accepts a job paying \$120 per week?

b. In light of your answer to part a, explain why means testing for welfare recipients has undesirable effects on work incentives.

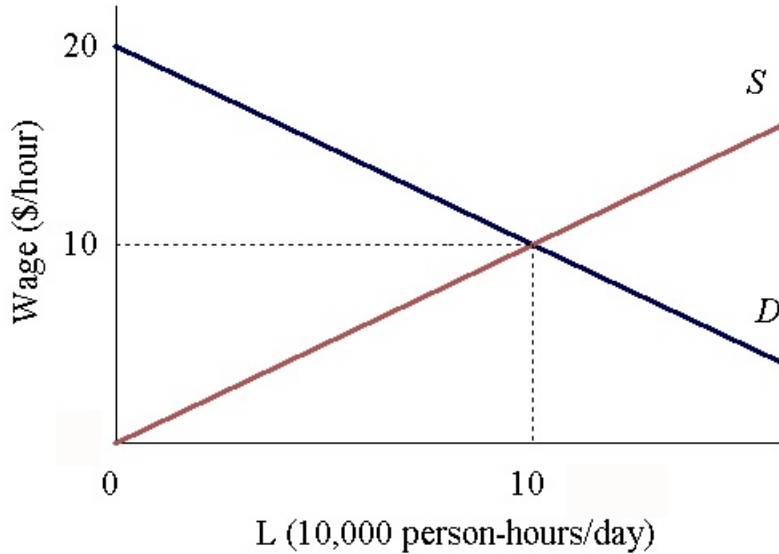
7. Sue is offered a job reshelving books in the University of Montana library from noon until 1pm each Friday. Her reservation wage for this task is \$10 per hour.

a. If the library director offers Sue \$100 per hour, how much economic surplus will she enjoy as a result of accepting the job?

b. Now suppose the library director announces that the earnings from the job will be divided equally among the 400 students who live in Sue's dormitory. Will Sue still accept?

c. Explain how your answers to parts a and b illustrate one of the incentive problems inherent in income redistribution programs.

8. Suppose the demand and supply curves for unskilled labor in the Corvallis labor market are shown in the figure below. By how much will the imposition of a minimum wage at \$12 per hour reduce total economic surplus? Calculate the amounts by which employer surplus and worker surplus change as a result of the minimum wage.



10. Describe an earned-income tax credit for workers (and a tax on employers that would raise enough money to pay for it) that would make both workers and employers better off than under the minimum wage.

On my honor, as an Aggie, I have neither given nor received unauthorized aid on this assignment.

Signature _____