

- How should the firm structure wages to encourage workers to work more hours?
- How does the firm set the piece rate to encourage dependable workers to apply while discouraging undependable workers from applying?

Problem 1:

Matthew works as an auto mechanic earning \$10.00 per hour. At this wage, Matthew chooses to work exactly 40 hours per week. (Assume Matthew has no unearned income.)

1. Draw an income/leisure diagram to show Matthew's choice of hours. (**Hint:** Draw the graph in terms of weekly income and leisure. You'll need the budget constraint and indifference curve.)

Because Business is booming, Rebecca, the garage owner is going to ask all mechanics to work **VOLUNTARY** overtime. She is considering the following as ways of encouraging her mechanics to work more:

- a) Continue to pay \$10.00 per hour and pay time-and-one-half for each hour worked more than 40 per week. **OR**
 - b) Raise the hourly wage so that at 50 hours of work per week the income paid to workers would be the same as in a).
2. Which proposal would Matthew prefer? Why? (**Hint:** Add the budget constraints implied by a) and b) to your graph.)
 3. Which proposal would be least expensive for Rebecca? Why?
 4. Which proposal is more likely to increase the hours that Matthew chooses to work? Why?

Problem 2:

You run a small bank and you need to hire some new workers to work with customers in settling up new accounts. You would like to be able to hire workers who are good at customer relations because you believe that if your customers are satisfied they will come back to you for other banking services in the future.

The problem is you can't tell which applicants have good customer relationship skills. Your personnel manager says that you can encourage the "right" people to apply by paying low wages during a probationary period and higher wages later on.

Suppose that you think that during the probationary period you will be able to identify the "right" workers with 100% certainty (i.e., $P^s = 1$), but the chance that you will mistake a "wrong" worker for a "right" worker is 1% (i.e., $P^u = .01$). You do some checking and

discover that the outside salary offer for “right” workers is \$24,000.00 and the outside salary offer for “wrong” workers is \$12,000.00.

1. What is the highest probationary salary you can pay that will keep the “wrong” workers from applying? (**Hint:** Suppose that the probationary period is one year, and the post-probationary period is nine years long.)
2. What is the lowest post-probationary salary you can pay and still get the “right” workers to apply?