

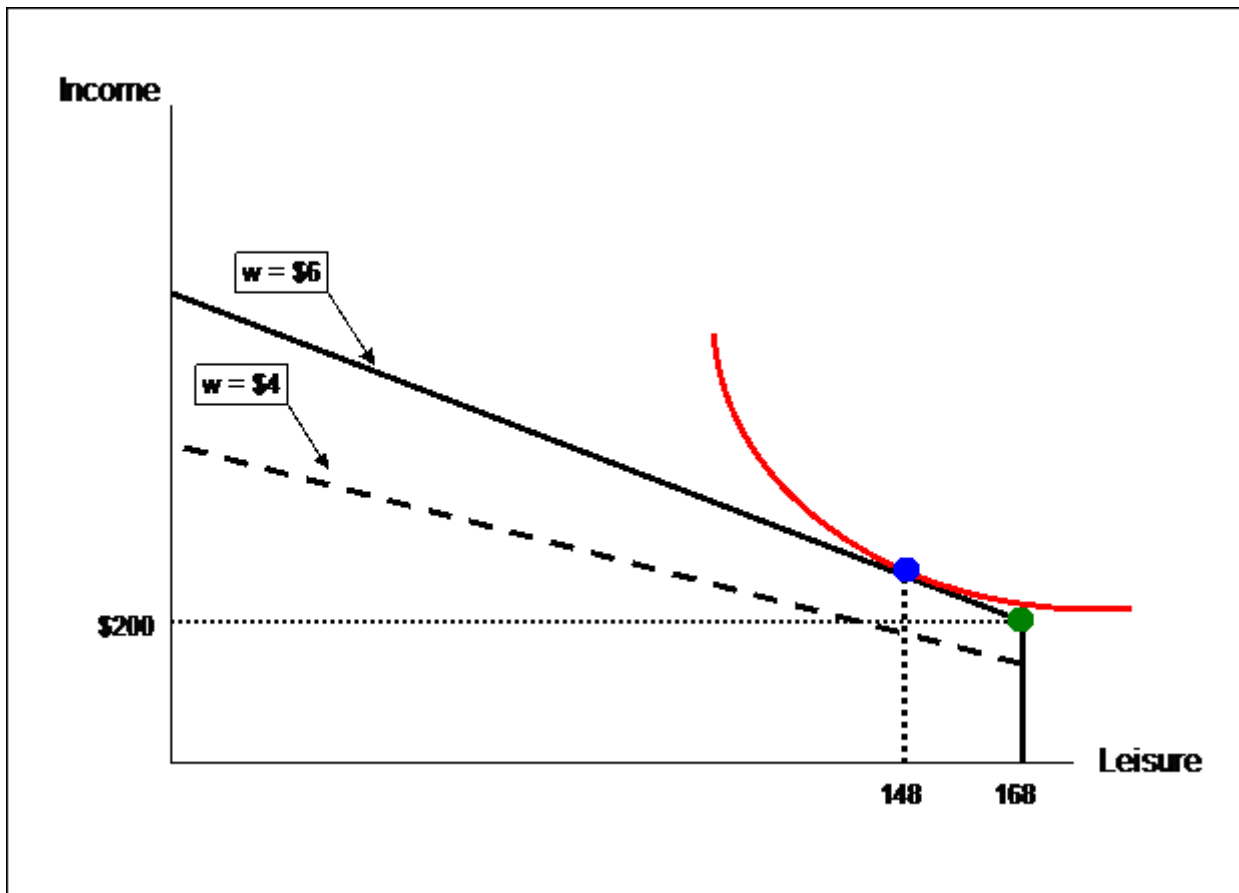
Econ 371 > Problem Set 1

1. These are all normative questions--thus your opinion is exactly that, your opinion. Having said that, though, your arguments should make use of economic analysis in defending your position.
2. The answer is in your notes and the text.
3. We did this one in class.
4. For a wage increase, the IE will tend to reduce desired hours of work while the SE will tend to raise the desired hours of work. If the IE > SE, then the labor supply curve will be backward bending.
5. Labor supply:
 - a) more hours
 - b) more hours
 - c) fewer hours
 - d) fewer hours
6. I'll leave this one for you to ponder.
7. We did Fred Glick for homework.
8. The \$1000 grant would cause a pure income effect that would tend to reduce the hours supplied and reduce a worker's LFPR. The higher tax rate would cause a reduction in the net wage facing the worker. Consequently, there will be a SE and IE associated with the wage decrease. The SE would imply fewer hours of work supplied, while the IE would imply more.
9. We did this one in class.
10. We did this one in class and as part of a homework.
11. Since the US only replaces about 50% of lost earnings due to disability, it is no surprise that we have fewer workers receiving disability benefits compared to the more generous European nations. Essentially, the Europeans are providing a larger pure income effect that creates an incentive to "choose" more leisure on the part of their "disabled" workers.
12. This is in the book and your notes.
13. Think in terms of SE and IE.
14. Child care costs.

The graph below shows the basic setup. The initial budget line is the solid black constraint starting at $L = 168$ and going up to the green dot (representing the \$200 in nonlabor income) and continuing up at the rate of \$6 per hour. Given this constraint, the woman chooses to work 20 hours (as shown with the tangency at the blue dot).

The effect of the child care costs is to lower the budget line by \$50 and also to flatten it out to a slope of \$4 per hour. In terms of the impact on labor supply, the fixed cost acts like a pure income effect: there will be an incentive to work more hours. The variable cost imposes a substitution effect: there will be an incentive to work less hours. Thus, the ultimate impact on hours of work will depend on the strength of the IE and SE.

However, I suspect that the woman will not relocate to the dashed budget line. Rather, she will relocate to the green dot, thereby dropping out of the labor force completely. The green dot is always available to the woman, whether she works or not. Any indifference curve tangent to the dashed budget line would probably represent a lower level of utility than what she could obtain by locating at the green dot.



15. The subsidy formula is $S = G - tY$. Thus, $S = 9,000 - (.5)(3000) = 7500$. The family's total income will be \$10,500 ($=3000+7500$). The breakeven level of income is \$18,000 (found by setting the subsidy equation to zero and solving for Y).

16. This one is for you to ponder.

17. This also requires some digging around in your text.

18. This material is straight out of the text and notes.

19. We did this one for homework.

20. We did this one for homework.

21. If the net present value of the investment is positive, then Floyd should take the mechanics course. Thus, $NPV = -9000 + 5000/(1.1) + 5000/(1.1)^2 + 5000/(1.1)^3 = \3434 and Floyd should take the course (this calculation assumes that Floyd must give up the job while taking the course).

22. One estimate would entail calculating the present value of Billy Bob's lost earnings over the remainder of his expected career. To do this you would need to know his expected incremental earnings and make a guess at what the appropriate discount rate should be. You might also include the value of lost household services to his family.

23. This is simply a restatement of the basic human capital decision model.

24. In general, the firm will only provide GT if the worker "pays" for it by accepting a lower wage during training or if the firm can exploit the worker after training by paying less than what the worker is worth. However, in the latter case, the worker will not voluntarily stay with the firm since he can always earn his enhanced MRP elsewhere. Under specific training, the firm is more likely to provide it if they can exploit the worker after training by paying him something less than his enhanced MRP₂. The worker has an incentive to stay at this firm since his W_2 is greater than what he could earn elsewhere.

25. The firm that spends \$3000 is clearly expecting to retain its employee longer than the firm that only spends \$1500. The firm spending \$3000 is probably providing some sort of specific training to the employee that they hope to recoup by having the worker stick around for several years after the training is completed.

26. This is likely to show up on the exam.

27. On the job training is likely to diminish with age for the same reason that older people are less likely to go to college: the post-training period is too short to make the upfront investment costs pay off.