

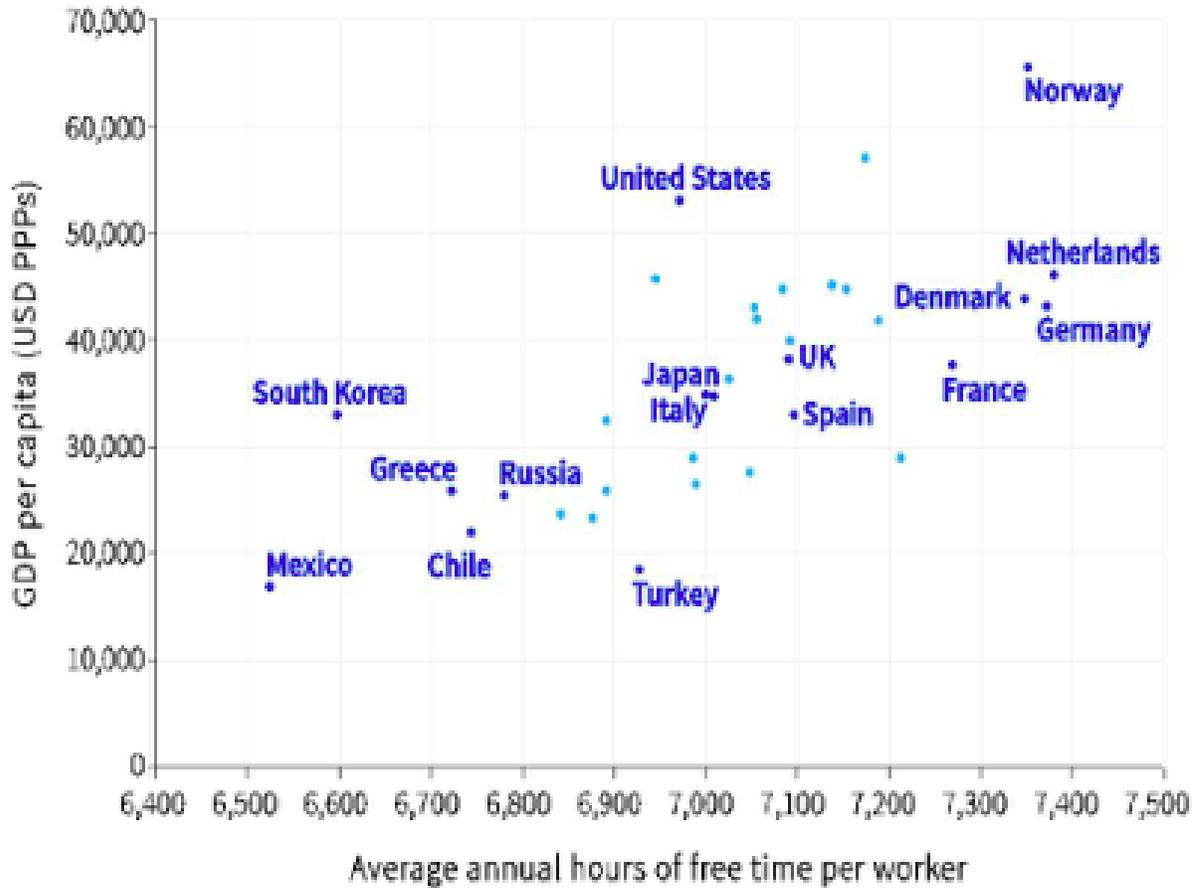
# ECON 2002.01 Problem Set 2

## *Unit 3*

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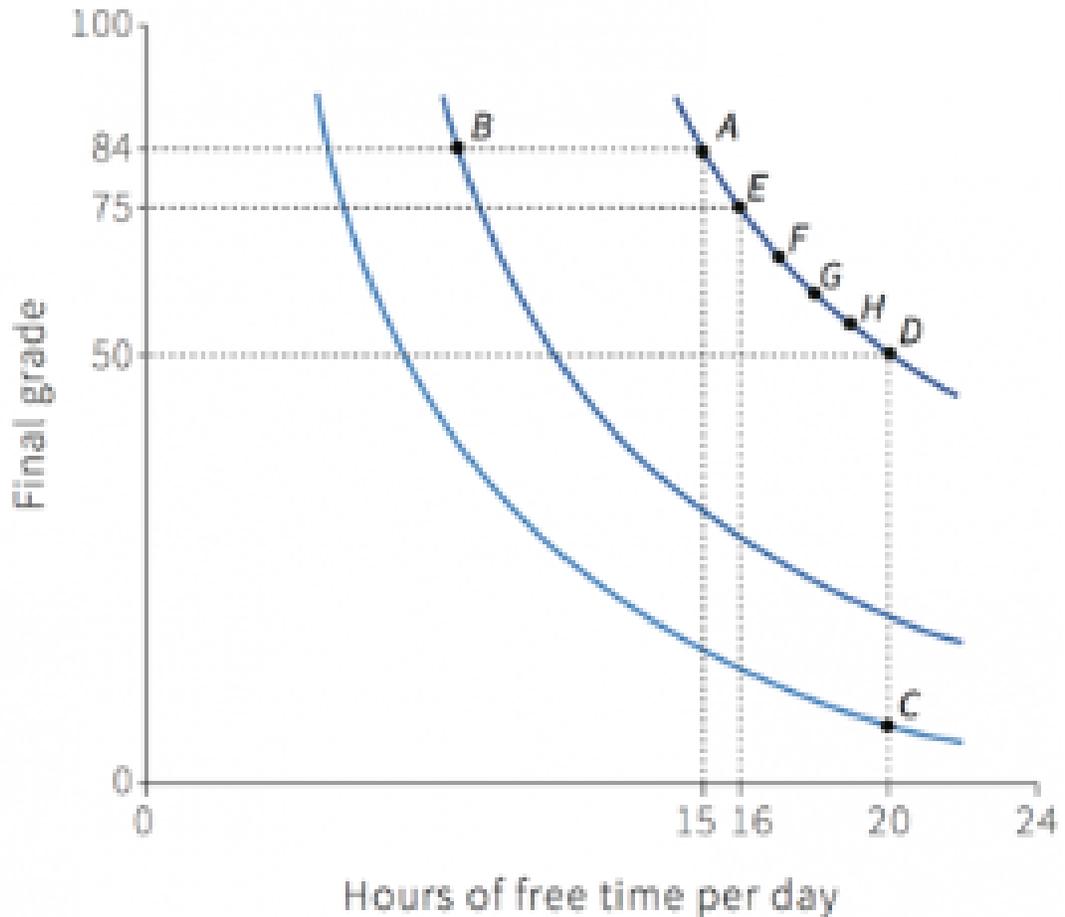
- ① (OUP-U3-Q1) You currently work for 40 hours a week at wage rate of £12 an hour. Your free hours are defined as the number of hours not in work, which in this case is  $24 \text{ hours} \times 7 \text{ days} - 40 \text{ hours} = 128 \text{ hours per week}$ . Suppose that you are happy to keep your total weekly income constant. Then: \_\_\_\_\_
- (A) If your wage rate increases to £16 an hour, then your free time will increase by 6%.
- (B) To have 12.5% more free time, your wage rate needs to increase by £8.
- (C) Doubling the wage rate would decrease your working hours by a third.
- (D) A wage cut of 25% leaves you with only 100 hours of free time.
- ② (OUP-U3-Q4) The following is a plot of GDP per capita against average annual hours of free time per worker in different countries. Which of the following statements is correct? \_\_\_\_\_



- (A) Workers in the US and Turkey enjoy a similar amount of free time despite the huge disparity of income.
- (B) Japanese workers require more hours of work to produce the same level of output per capita as Korean workers.
- (C) If German workers worked as many hours as the Norwegians, then they will be able to produce a similar level of output per capita.
- (D) The plot gives strong evidence that workers choose to enjoy more free time as their living standards rise.

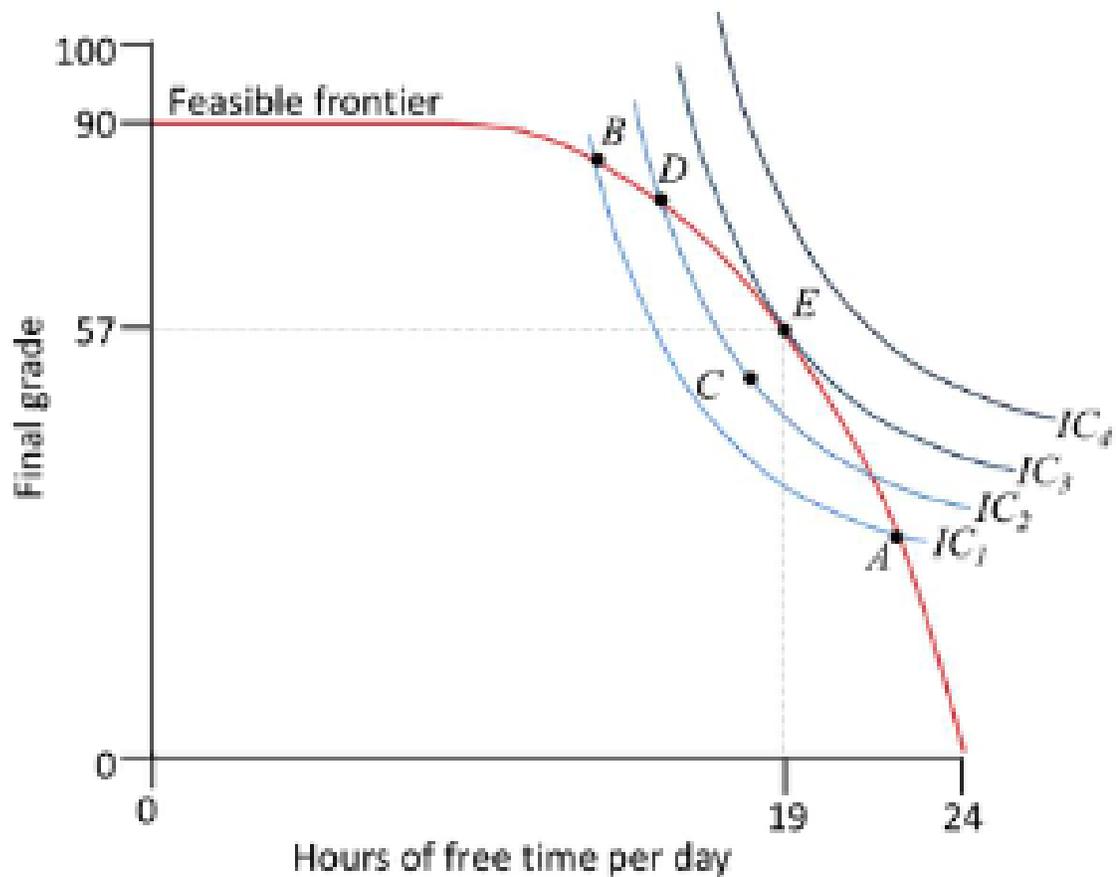
③ (OUP-U3-Q9) The figure shows the indifference curves of a student for the two 'goods', free time and final grade. Based on this information, which of the following statements is correct? \_\_\_\_\_

	A	E	F	G	H	D
Hours of free time	15	16	17	18	19	20
Final grade	84	75	67	60	54	50



- (A) At A, the student is willing to give up 34 grade points for five extra hours of free time.
- (B) A is the student's most preferred choice as she would be attaining the highest grade.
- (C) The student strictly prefers a grade of 54 with 19 hours of free time to a grade of 67 with 18 hours of free time.
- (D) If at B the number of free hours is 10, then the student is 50% happier at A than at B.

- ④ (OUP-U3-Q14) You have two choices for how you are going to spend Saturday evening. You can go to the pub with your friends, which will cost you £30 for the evening. The pleasure you anticipate from this experience is worth £50 to you. Or you can go to the theatre. The ticket will cost you £50, but you value the experience at £60. Based on this information, which of the following statements is correct? \_\_\_\_\_
- (A) The opportunity cost of an evening at the theatre is £10.
  - (B) The economic cost of going to the theatre is £60.
  - (C) The economic rent of going to the theatre is -£10.
  - (D) Based on economic rent alone, you would choose to go to the theatre.
- ⑤ (OUP-U3-Q18) The figure shows a student's feasible frontier and her indifference curves for final exam marks and the hours of free time per day. The table also gives the marginal rate of substitution (MRS) and the marginal rate of transformation (MRT) for the points shown in the figure. Based on this information, which of the following statements is correct? \_\_\_\_\_



	<b>B</b>	<b>D</b>	<b>E</b>	<b>A</b>
<b>Free time</b>	13	15	19	22
<b>Grade</b>	84	78	57	33
<b>MRT</b>	2	4	7	9
<b>MRS</b>	20	15	7	3

- (A) At A, one hour of free time is equivalent in value to 3 grade points. However, 1 extra hour of studying leads to 9 extra grade points. She should therefore study more.
- (B) At B, one hour of free time is equivalent in value to 2 grade points. However, 1 extra hour of studying leads to 20 extra grade points. She should therefore study more.

- (C) At D, the MRT of 4 means that if she gives up all of her free time, she can attain 60 extra grade points.
- (D) At E, the MRS matches the student's MRT. Therefore she should exchange one hour of free time with 7 extra grade points.

⑥ (OUP-U3-Q23) Consider a worker whose choice is between hours of free time and consumption. His company has now cut his wage rate. Which of the following statements is correct? \_\_\_\_\_

- (A) As a result of the substitution effect, the worker would reduce his free time.
- (B) The income effect means that the worker would increase his free time.
- (C) The worker may or may not reduce his free time as a result of the wage cut.
- (D) The income effect will always dominate the substitution effect of the wage cut.

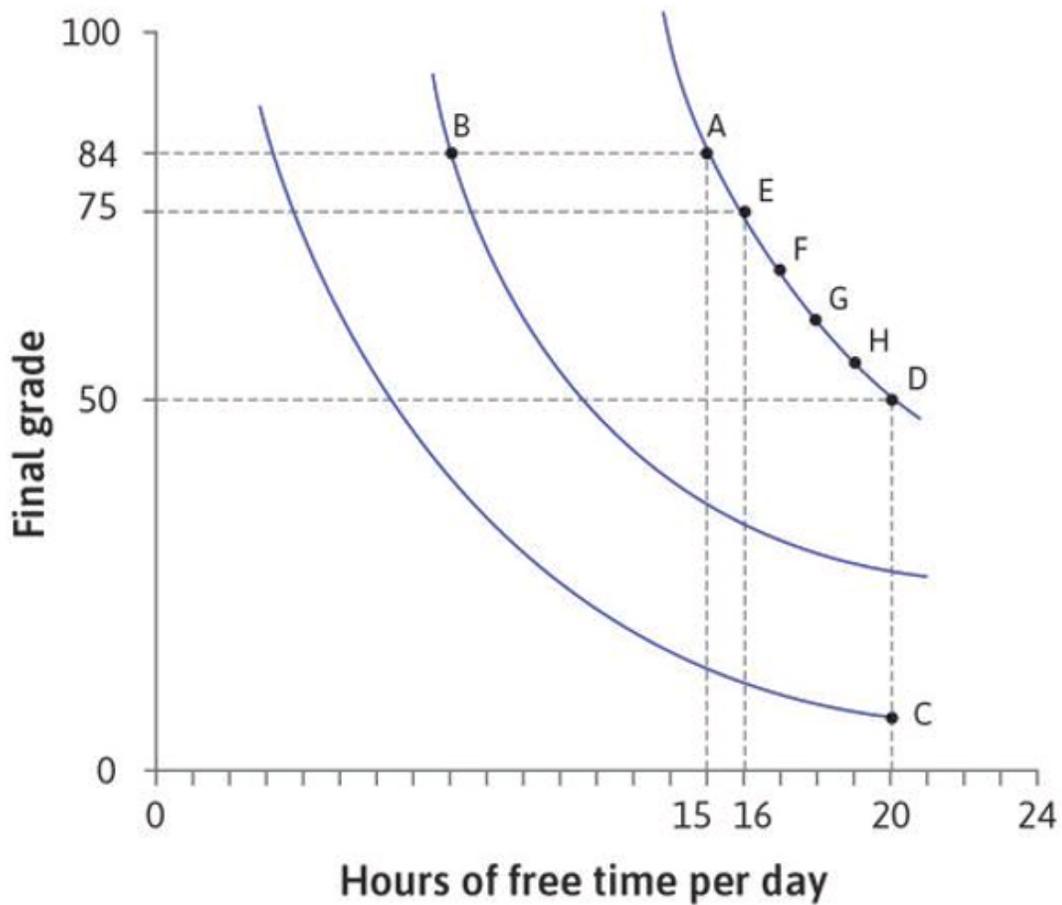
⑦ (TEA-U3-Q5) Consider indifference curves for the consumption of milk and chocolates (you may assume that both are 'goods'). The indifference curves are drawn with the number of chocolate bars on the horizontal axis and pints of milk on the vertical axis. Suppose that at every point, consumer A's indifference curve is flatter than consumer B's. In this case, we can conclude that: \_\_\_\_\_

- (A) Consumer A's utility from chocolate is higher than Consumer B's.
- (B) The price of milk relative to the price of chocolates is higher for consumer A than for consumer B.
- (C) Consumer A's indifference curves cannot cross/intersect Consumer B's indifference curves.
- (D) Given the same amount of chocolates, consumer A is willing to swap one bar of chocolate for a smaller amount of milk than consumer B.

⑧ (UCL-J18-Q2) Which (if any) of the following statements regarding hours of work and income must be true, based only on the information given? Note: a normal good is one for which demand rises with income. \_\_\_\_\_

- (A) The opportunity cost of an hour reading the newspaper is the hourly wage rate.
- (B) France must have a higher average wage than the US, as the French work less hours than the Americans.
- (C) An unconditional cash transfer to citizens would encourage them to work less if leisure is a normal good.
- (D) An unexpected wage increase will always motivate citizens to work more.

⑨ (ECO-U3-Q4) Figure 3.6 shows Alexei's indifference curves for free time and final grade. Which of the following is true? \_\_\_\_\_

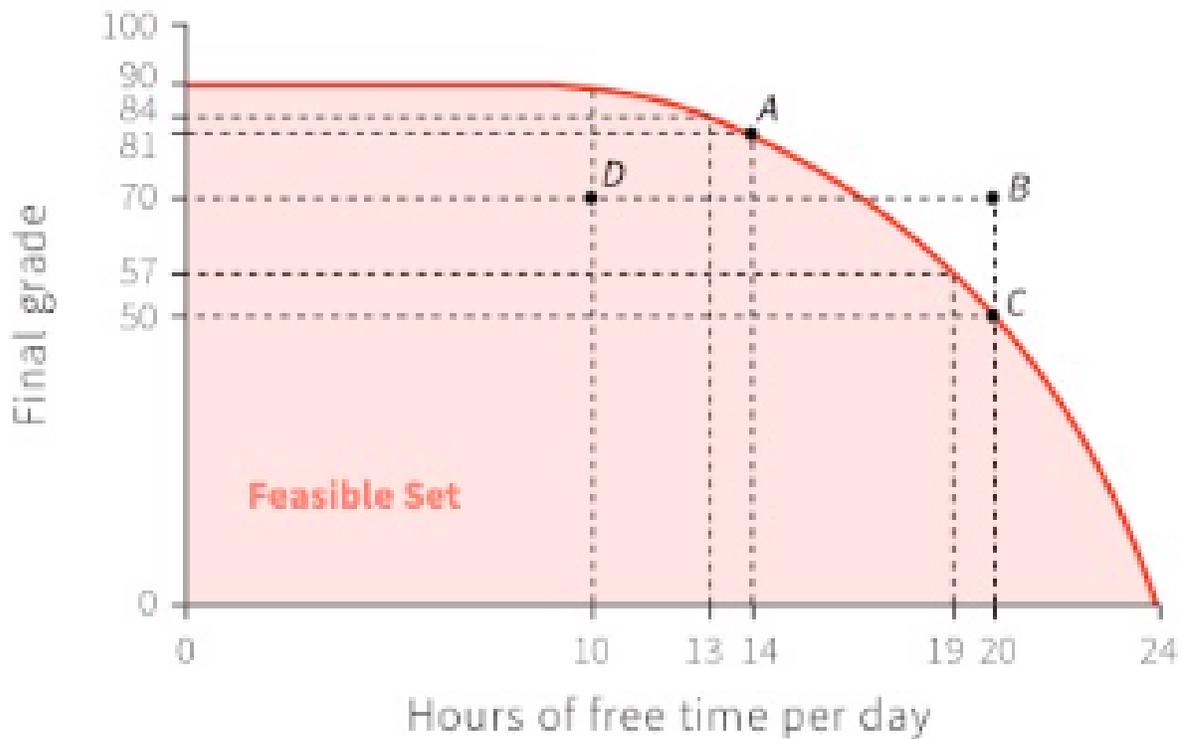


	A	E	F	G	H	D
<b>Study hours</b>	15	16	17	18	19	20
<b>Grade</b>	84	75	67	60	54	50

- (A) Alexei prefers C to B because at C he has more free time.
- (B) Alexei is indifferent between the grade of 84 with 15 hours of free time, and the grade of 50 with 20 hours of free time.
- (C) Alexei prefers D to C, because at D he has the same grade and more free time.
- (D) At G, Alexei is willing to give up 2 hours of free time for 10 extra grade points.

⑩ (OUP-U3-Q15) The following diagram is the feasible set of a student, showing the combinations of her final grade and the hours of free time per day. Based on this information, we can say that: \_\_\_\_\_

		A		C
Free time	13	14	19	20
Grade	84	81	57	50
MRT		3		7



- (A) Whether the student would choose A or B depends on her preferences.
- (B) At A, the student can attain grade of 81 for 14 hours of study.
- (C) C would never be chosen over A.
- (D) The marginal rate of transformation increases with higher number of free hours.