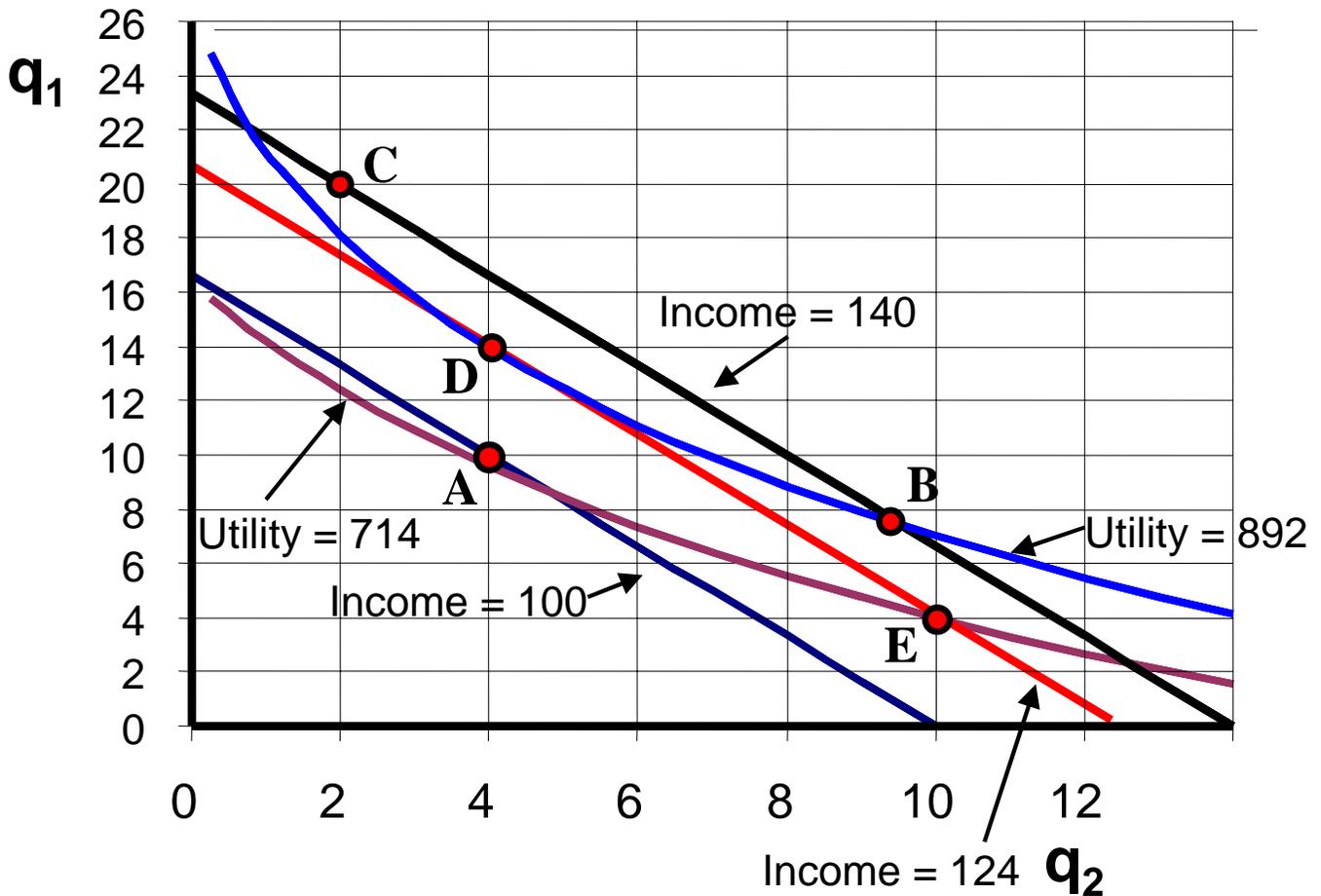


**Economics 101
Spring 2001
Section 4 - Hallam
Exam 2A - Blue**

For questions 1-6 consider the diagram below. In this diagram the price of q_1 is \$6.00 and the price of q_2 is \$10.00. Hongli's indifference curves for utility levels of 892 and 714 are sketched in the diagram.

Indifference Curves/Budget Lines



1. If Hongli spends \$100, which labeled point will she be on?
 - a. A
 - b. B
 - c. C
 - d. D
 - e. E

2. If Hongli has \$124 to spend, which points are feasible for her?
 - a. D & E only
 - b. B & D only
 - c. A, D & E only
 - d. D only
 - e. B & C only

3. What is the equation of Hongli's budget line when her income is \$140?
- $q_1 = \frac{50}{3} - \frac{10}{6} q_2$
 - $q_1 = 20\frac{2}{3} - \frac{3}{5} q_2$
 - $q_1 = \frac{140}{3} - \frac{10}{6} q_2$
 - $q_1 = \frac{70}{3} - \frac{5}{3} q_2$
 - $q_1 = \frac{140}{6} - \frac{6}{10} q_2$
4. At the point where Hongli maximizes utility, her marginal rate of substitution of q_1 for q_2 is
- 3/5
 - 5/62
 - 124/892
 - 5/3
 - Cannot tell from the diagram
5. Which of the following is true?
- Hongli is indifferent between points D and E.
 - Hongli prefers point B to point D.
 - Hongli prefers point E to point D.
 - Hongli prefers point B to point E.
 - Hongli is indifferent between points B and C.
6. Assume that Hongli has an income of \$124. Which of the following is true?
- She maximizes utility at point E.
 - She can maximize utility at point B or point D.
 - She is indifferent between points D and E because they both cost \$124.
 - She cannot afford point A.
 - She maximizes utility at point D.
7. Consider the following demand and supply curves $Q^D = 32 - P$ $Q^S = 3P - 8$. The equilibrium price and quantity are given by
- $P = 9, Q = 21$
 - $P = 12, Q = 20$
 - $P = 12, Q = 28$
 - $P = 10, Q = 22$
 - $P = 11, Q = 21$
8. Consider the following supply curve $Q^S = 4P - 10$, and inverse demand curve $P = 25 - \frac{1}{2}Q^D$. The equilibrium price and quantity are given by
- $P = 5, Q = 40$
 - $P = 8, Q = 22$
 - $P = 11, Q = 34$
 - $P = 10, Q = 30$
 - $P = 12, Q = 38$

9. Consider a demand curve written as $Q = 400 - 2P$. What is the elasticity of demand (mid-point formula) as price goes from \$150 to \$125?
- $-4\frac{1}{3}$
 - 1.8181
 - $-\frac{11}{5}$
 - $-\frac{5}{11}$
 - 0.55
10. The government has determined the cost of the average consumption bundle in a number of different price situations. This represents the price level in the economy. In which of the following situations would a consumer be most satisfied?
- an annual income of \$24,000 when the standard bundle costs \$2,000.
 - an annual income of \$40,000 when the standard bundle costs \$4,000.
 - an annual income of \$66,000 when the standard bundle costs \$6,000.
 - an annual income of \$80,000 when the standard bundle costs \$10,000.
 - an annual income of \$99,000 when the standard bundle costs \$11,000.

Use the following table to answer questions 11 and 12 where the data in the table gives the **cost per unit** for each item.

	Per box lettuce	Per watch
Israel	40 shekels	240 shekels
Germany	30 marks	150 marks

11. What is the opportunity cost of producing one more box of lettuce in Israel?
- 240 shekels
 - 1/5 watch
 - 5 watches
 - 1/6 watch
 - 6 watches
12. Which of the following is true?
- Israel has a comparative advantage in producing watches.
 - Germany has a comparative advantage in producing watches.
 - Israel has an absolute advantage in producing both goods.
 - Israel has a comparative advantage in producing lettuce.
 - Both d and b are correct.
13. If the demand for hot dogs and buns is price inelastic, what will happen to revenue of the hot dog vendor if he lowers the price of hot dogs?
- Revenue will fall
 - Revenue will rise
 - Revenue will remain the same
 - One cannot tell

14. The marginal rate of substitution measures the
- slope of the demand curve.
 - the slope of the budget line.
 - the percentage change in quantity demanded for a good due to a percentage change in price.
 - the amount of one good that must be given up to acquire more of another good while holding total utility constant.
 - percentage change in the quantity of one good due to a percentage change in the price of a substitute good.

For questions 15 and 16, consider the following data on oil and rice production in Indonesia and Thailand where the data is production per time period. Assume that the production possibility frontier is linear. With no rice production, Indonesia can produce 9,000 barrels of oil. With 360 tons of rice, Indonesia has no oil production, etc.

	Oil	Rice
Indonesia	9,000	0
Indonesia	0	360
Thailand	6,000	0
Thailand	0	300

15. Which of the following statements is true?
- Thailand has an absolute advantage in oil production.
 - Thailand has a comparative advantage in oil production.
 - Indonesia has a comparative advantage in oil production.
 - Cannot say which country has an absolute advantage in either product.
 - Both a and b are correct.
16. If Indonesia produced 3,000 barrels of oil and Thailand produced 2,000 barrels of oil and each used their remaining resources for rice production, what would total rice production be?
- 300 tons
 - 440 tons
 - 200 tons
 - 460 tons
 - 430 tons

17. Gilligan and the Skipper live on an island. The following table represents their **output in a day** of work.

	Turtles	Coconuts
Gilligan	36	6
Skipper	54	9

Which of the following statements is true?

- Gilligan has an absolute advantage in both products and a comparative advantage in coconuts.
- Gilligan has an absolute advantage in neither product and a comparative advantage in coconuts.
- The Skipper has an absolute advantage in both products and a comparative advantage in neither product.
- The Skipper has a comparative advantage in coconuts.
- Gilligan has an absolute advantage in coconuts and a comparative advantage in coconuts.

18. Consider the following hypothetical data on pencil and pen production in Bolivia and Ecuador. Assume that capital is freely mobile so only labor costs matter. Also assume that real wages will tend to equalize so that only labor quantities matter. The data below gives the number of **minutes required per unit of output**.

	Pens	Pencils
Bolivia	4 minutes	3 minutes
Ecuador	3 minutes	2 minutes

Which of the following statements is true?

- Bolivia can produce both products in less time per unit.
 - Ecuador has a comparative advantage in pens.
 - Bolivia has a comparative advantage in pens.
 - Neither country has a comparative advantage in either product.
 - Both a and b are correct.
19. Using the data from the previous question, how many pens can Bolivia make per minute?
- 1/3 pen
 - 4 pens
 - 1/2 pen
 - 1/4 pen
 - 2/3 pens

20. Consider the following data on consumption of q_1 and q_2 . The price of q_1 is \$9.00. The price of q_2 is \$3.00. Income is \$90. Which of the following combinations of goods maximizes utility.

q_1	q_2	MRS_{12}
10.0000	0.0000	-8.66667
9.0000	3.0000	-2
8.0000	6.0000	-1.04762
7.0000	9.0000	-0.66667
6.3333	11.0000	-0.51852
5.0000	15.0000	-0.33333
4.3333	17.0000	-0.2716

- $q_1 = 9, q_2 = 3$
 - $q_1 = 8.0, q_2 = 6$
 - $q_1 = 7.0, q_2 = 9$
 - $q_1 = 6.333, q_2 = 11$
 - $q_1 = 5.0, q_2 = 15$
21. Randy receives the following levels of total utility from different numbers of calculators. One calculator gives 2,000 units, 2 calculators together give 2,500 units, etc.

Number	Utility
1	2,000
2	2,500
3	2,700
4	2,800

What is the marginal utility of the third calculator?

- 100
- 400
- 200
- 500
- 2000

Use the table below for questions 22 - 25. The table contains data on demand for 2 goods, screwdrivers (S) and curling irons (C). The notation is as follows: PS = price of screwdrivers, PC = price of curling irons, I = income, DS = demand (quantity) for screwdrivers, DC = demand (quantity) for curling irons. There are four situations shown.

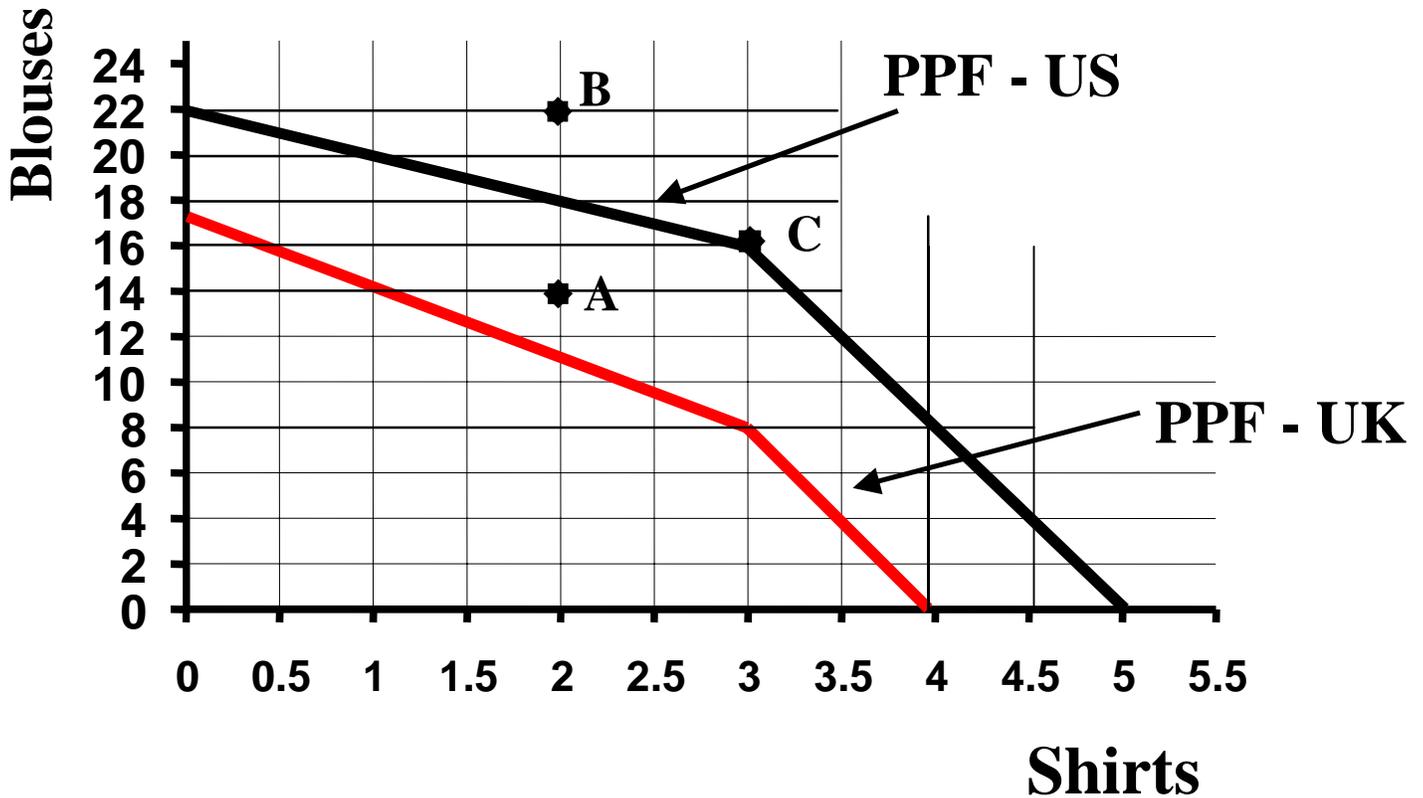
			DS		DC					DS		DC	
PS	PC	I	I = 84	PC = 4	I = 84	PC = 4	PS	PC	I	I = 104	PC = 4	I = 104	PC = 4
2.00	4.00	84.00	37.80	2.10	2.00	4.00	104.00	45.80	3.10				
4.00	4.00	84.00	18.60	2.40	4.00	4.00	104.00	22.60	3.40				
6.00	4.00	84.00	12.20	2.70	6.00	4.00	104.00	14.87	3.70				
8.00	4.00	84.00	9.00	3.00	8.00	4.00	104.00	11.00	4.00				
10.00	4.00	84.00	7.08	3.30	10.00	4.00	104.00	8.68	4.30				
12.00	4.00	84.00	5.80	3.60	12.00	4.00	104.00	7.14	4.60				
14.00	4.00	84.00	4.89	3.90	14.00	4.00	104.00	6.03	4.90				
16.00	4.00	84.00	4.20	4.20	16.00	4.00	104.00	5.20	5.20				

			DS		DC					DS		DC	
PS	PC	I	I = 84	PC = 2	I = 84	PC = 2	PS	PC	I	I = 104	PC = 2	I = 104	PC = 2
2.00	2.00	84.00	35.40	6.60	2.00	2.00	104.00	43.40	8.60				
4.00	2.00	84.00	17.40	7.20	4.00	2.00	104.00	21.40	9.20				
6.00	2.00	84.00	11.40	7.80	6.00	2.00	104.00	14.07	9.80				
8.00	2.00	84.00	8.40	8.40	8.00	2.00	104.00	10.40	10.40				
10.00	2.00	84.00	6.60	9.00	10.00	2.00	104.00	8.20	11.00				

22. What is the price elasticity of demand for screwdrivers when income is \$104, the price of curling irons is \$4.00, and the price of screwdrivers goes from \$6 to \$8?
- 1.057
 - 1.031
 - 1.047
 - 0.940
 - 0.955
23. What is the income elasticity of demand for screwdrivers when the price of curling irons is \$4.00, the price of screwdrivers \$10, and income goes from \$84 to \$104?
- 1.000
 - 0.954
 - 1.007
 - 0.940
 - 1.016
24. Now consider the demand for screwdrivers when the price of screwdrivers is \$6.00 and income is \$84. Consider a change in the price of curling irons from \$4 to \$2. For this price change you can compute the cross price elasticity of demand for screwdrivers with respect to the price of curling irons. At these prices and incomes, are these goods
- Substitutes
 - Complements
 - Can't tell
25. Now consider the demand for screwdrivers when the price of curling irons is \$2.00, the price of screwdrivers \$10, and income goes from \$84 to \$104? In this range are screwdrivers are
- luxury
 - a necessity
 - an inferior good
 - Cannot tell from the data

The diagram below is for use with question 26. The two countries are the United States (US) and the United Kingdom (UK). The data is output per day in each country.

Production Possibility Set Shirts and Blouses



26. When each country is producing 1 shirt, which of the following statements is true?
- The opportunity cost of a shirt in the US is 1 blouse.
 - The opportunity cost of a shirt in the US is 2 blouses.
 - The opportunity cost of a shirt in the UK is 2 blouses.
 - Both b and e are correct.
 - The US has a comparative advantage in shirts.

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Question	Correct Answer	Question	Correct Answer
1	a	14	d
2	c	15	c
3	d	16	b
4	d	17	c
5	d	18	c
6	e	19	d
7	d	20	e
8	d	21	c
9	c	22	c
10	a	23	b
11	d	24	a
12	e	25	a
13	a	26	d