First Exam

Write all answers in your blue book and show all work there. Return your exam in your blue book.

1) a) Suppose that $Q_D = 400 - 25P$ and Q_S is fixed at 200. What will a 2 dollar sales tax do to the gross price, the net price and the equilibrium quantity?
b) Suppose that $Q_S = -200 + 25P$ and P is fixed at 12. What will a 2 dollar sales tax do to the gross price, the net price and the equilibrium quantity?

15 pts.
2) a) The coach of the Austrian ski team wants the people with the most skiing talent to be on the ski team. Would this policy necessarily bring Austria the most Olympic medals? Explain using concepts of efficient resource allocation.
b) The table below shows the number of medals that we expect from Peekaboo and Chris if they specialize in either skiing or skating and don't compete against each other.

Expected Number of Medals

	Skiing	Skating
Peekaboo	5	4
Chris	4	1

Who has the absolute advantage in both sports? Does she also have the comparative advantage in both sports? Why? Presuming that we want our stars in different sports, where would you put them? Why?

15 pts.
3) a) If $P_X = 2$, $P_Y = 3$ and $MRS_C = -2$, what can be done to increase utility?
b) If $P_X = 2$, $P_Y = 3$, $MU_X = 1$ and $MU_Y = 2$, what can be done to increase utility?
c) If Income $= 100$, $X = 20$, $Y = 10$, $P_X = 2$, $P_Y = 3$ and $MRS_C = -2/3$, what can be done to increase utility?

14 pts.
4) a) Draw a well-lableled diagram that shows an interior solution for two goods.
b) Draw a well-lableled diagram that shows an corner solution for two goods.
c) Draw a well-lableled diagram that shows an interior solution for two bads.
d) Draw a well-lableled diagram that shows an corner solution for two bads.
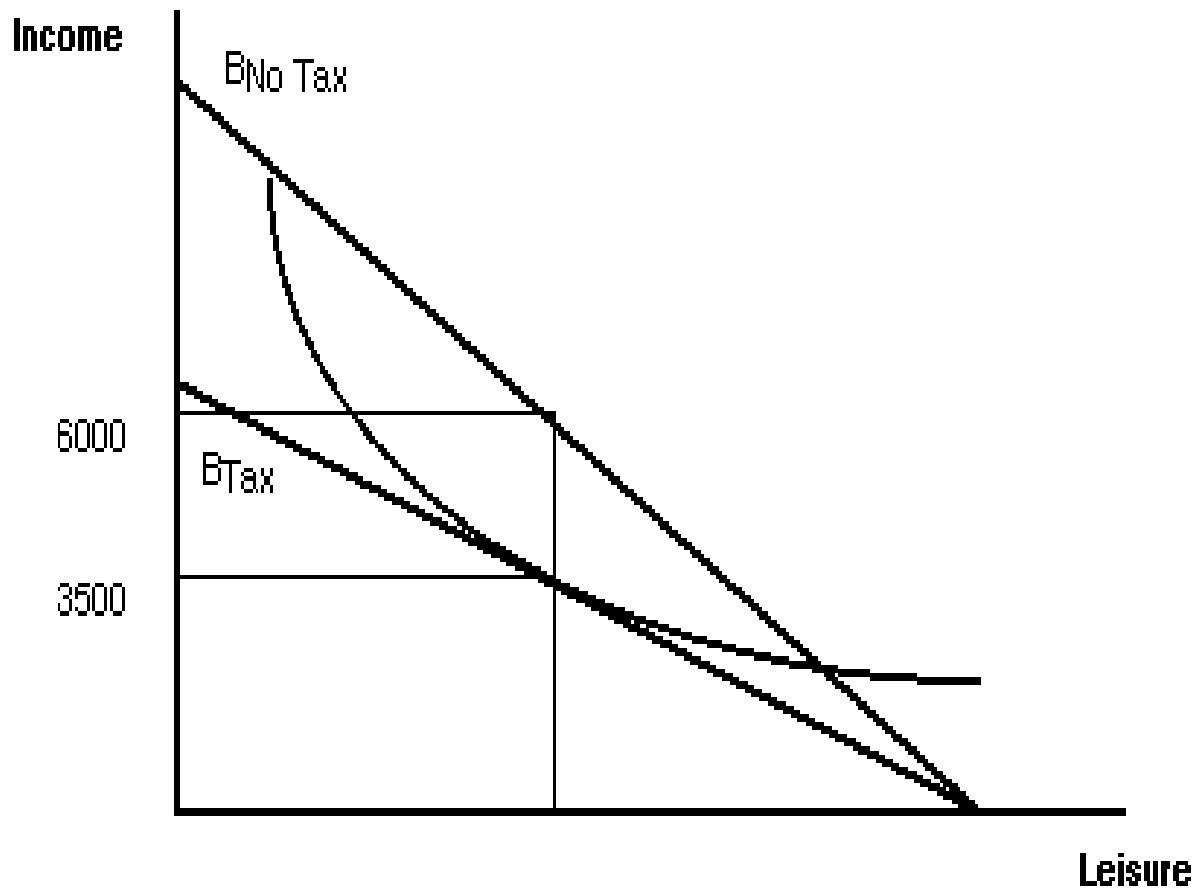
14 pts.
5) a) Draw a well-labeled diagram that shows a Paasche price index when real income is constant from year 1 to year 2.
b) Does utility stay the same from year 1 to year 2 in your diagram? Explain.

14 pts.
6) Suppose that $TC = 20 + 2Q + Q^2/4$.
a) What is the MC function?
b) What is the AC function?
c) At what Q is AC minimized?

14 pts.
7)

Income

B No Tax

6000

B Tax

3500

Leisure

Given the diagram, would the individual prefer the income tax shown or a head tax of 2500 dollars? Why?
What is the income tax rate in the diagram?

I have neither given nor received unfair aid on this test.

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