Place your name on the back of this sheet of paper and nowhere else. Staple your answers face up on the front of this sheet of paper. Failure to follow these directions will cost you 10 points. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Failure to type it will cost you 10 points. If you use double-sided printing or print on the back of scrap paper, I will give you one additional point.

1) (20 points) The table to the right can be used to calculate three different elasticities. There is a pair of rows which can be used to calculate the cross-price elasticity, E_{XY} and a different pair for income elasticity, E_I. The other pairs of rows cannot be used. Which pair of rows can be used for E_{XY} and E_I? Explain your logic. Calculate E_{XY} using the arc formula and E_I using the point formula. Show all work. What do those numbers tell you about the products? (pb is peanut butter and j is jelly.)

P_{pb}	P_J	I	Q_{pb}
10	10	100	40
10	10	50	30
30	20	100	10
30	10	100	20

2) (10 points each) Give me an estimate for each of the following elaticities. Explain how you decided what the number should be. Put each answer in separate paragraphs.
A) Cross-price elasticity of demand for compact discs and music downloads.
B) Income elasticity of demand for hamburgers.
C) Elasticity of supply for mahogany wood.

3A) (30 points) Copy the table below onto your answer sheet. Fill it in. Explain how you got each number. Hats cost $20 each and coats cost $50 each.

Hats	TU_H	MU_H	MU_H/P_H	Coats	TU_C	MU_C	MU_C/P_C
0				0			
1	200			1	300		
2		160			550		5
3			5		950	200	

B) (10 points) If you had $160 to spend on hats and coats, then how many of each would you buy? Explain your logic. (If I would you, I would use the quick method, not the long method.)

4) (10 points) What is the equation for maximizing utility? Why isn't it $MU_X=MU_Y$?