Economics 11 Caltech Spring 2010

QUIZ 3

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Following the Honor code, you should find 20 minutes and do the quiz, by yourself and without using any notes. Paper and pen should be all you need. Turn it in by Thursday 4-22 5pm. (drop off in lecture or in box in front of Baxter 133).
Each quiz is worth 6pts (for 48 out of 200 possible pts for all 8 quizzes)

The answers to the whole homework will be available Friday at 2pm.
Definition (use words not equations)
3 lines or less

1pt Please explain Contract curve.

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Word problem
2pts True or False: Please explain each question in a few sentences.

A firm’s marginal rate of technical substitution captures the firm’s willingness to trade capital for labor, but not the degree to which capital and labor are substitutes in supply.
Technical problem
3 pts

1. Assume a two person, two good exchange economy.
   Ms. Blue’s utility function for goods x and y is given by: \( U_b = x^{0.7} y^{0.3} \).
   Ms. Red’s utility function for goods x and y is given by: \( U_r = x^{0.5} y^{0.5} \).

Blue has 40 ounces of x and 20 ounces of y. Red has 20 ounces of x and 60 ounces of y.

a) What are the demands of for X and Y by Blue and Red as a function of prices and incomes.

b) If the price of X is fixed at 1, then what are the income of Ms Blue and Ms Red as a function of Py.

c) Blue and Red can trade at a market price as price-takers with \( p_x = 1 \). Using the information above determine the equilibrium price of y. What is the final allocation of x and y?