Economics 101                                   Name _____
Summer 2016
Quiz #1 with Answers

This is a ten point quiz. Answer all questions neatly and legibly. Although this quiz is not counted in your grade you want to do your best job so that you can get an accurate assessment of your baseline preparation for the class. Show your work.

1. Jason and Donna write books and make rugs. The following information is provided about Jason and Donna's ability to make these two goods. Assume that both Jason and Donna have linear production possibility frontiers in these two goods.

|         | Number of Hours Needed to Produce One Book | Number of Hours Needed to Produce One Rug |
|---------|--------------------------------------------|-------------------------------------------|
| Jason   | 10 hours                                   | 4 hours                                   |
| Donna   | 20 hours                                   | 6 hours                                   |

a. (1 point) Suppose that Jason has 80 hours available to make books and rugs. What is the maximum number of books he can make in this time? _____

b. (1 point) Suppose that Jason has 80 hours available to make books and rugs. If Jason makes 6 books, what is the maximum amount of rugs that he can make given this time constraint? _____

c. (2 points) In the space below draw two graphs. Label the first graph Jason's PPF and label the second graph Donna's PPF. Draw the PPFs for each of these individuals based upon each of them having 60 hours of time available to make either books or rugs. Label all axis and all intercepts clearly and completely. Measure books (B) on the X-axis and rugs (R) on the Y-axis.

d. (2 points) Given the above information and assuming that both Jason and Donna have 60 hours each to devote to book and rug production:

i) Who has the comparative advantage in book production? _____

ii) Who has the absolute advantage in rug production? _____

e. (2 points) In the space below draw Jason and Donna's joint PPF based upon their each having 60 hours of time they can devote to either book or rug production. Measure rugs (R) on the Y-axis and books (B) on the X-axis. Identify the coordinates of any kink point in your graph as well as the values of both the X and Y intercepts. Make sure your graph is completely and clearly labeled.

f. (2 points) Using the number line approach outlined in during the class lecture, provide a representation of the acceptable trading range for 3 rugs in terms of books. In your representation

indicate the perspective of both Jason and Donna. Make sure your diagram is completely and clearly labeled.
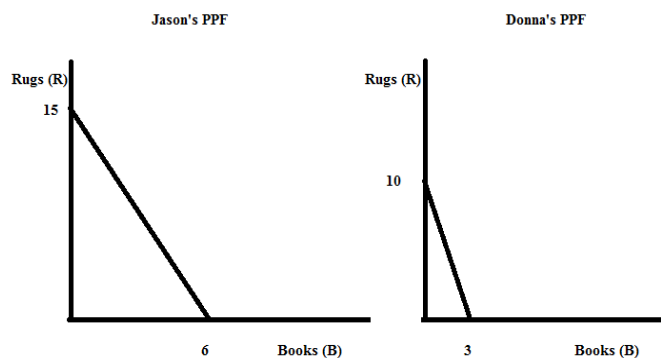
Answers:
a. 8 books

Since (Maximum Number of Books that can be produced) = (Number of Hours available)/(Number of Hours per Book) = 80/10 = 8 books
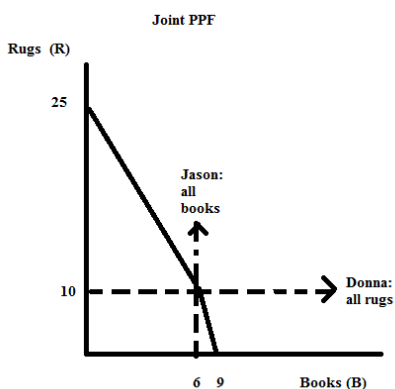
b. 5 rugs

It takes Jason 60 hours to make 6 books. That means that Jason has 20 hours available to make rugs. (Maximum Number of Rugs that can be produced) = (Number of Hours available)/(Number of Hours per Rug) = 20/4 = 5 rugs

c.



d. i) Jason has the comparative advantage in book production: his opportunity cost of producing one book is 5/2 rugs while Donna's opportunity cost of producing one book is 10/3 rugs.
ii) Jason has the absolute advantage in rug production: he can produce a maximum of 15 rugs with 60 hours of time while Donna can only produce 10 rugs in 60 hours of time.

e.

f.

1 ~~Rug~~

3 Rugs

**Jason's Perspective**

(3/~~10~~) B
3(3/10)B = (9/10B)

(2/~~5~~)B
3(2/5)B = (6/5)B

**Donna's Perspective**