

Please write your answers neatly and legibly.

1. Consider Bob, Jane, and Marco, three individuals who produce zippers (Z) and radios (R). All three of these individuals have linear PPFs for these two goods. Bob knows that he is able to produce $(R, Z) = (10, 10)$ and $(15, 5)$ given his PPF. Jane knows that she can produce $(R, Z) = (20, 5)$ and $(15, 10)$ given her PPF. Marco knows that he can produce $(R, Z) = (0, 20)$ and $(5, 10)$ given his PPF. Use this information to answer this set of questions.

a. (1.5 points) In the space below draw three graphs. In the first graph depict Bob's PPF measuring Zippers (Z) on the vertical axis and Radios (R) on the horizontal axis: label this graph "Bob's PPF". Make sure you fully label this graph and the numeric values for the X and Y intercepts. In the second graph depict Jane's PPF using the same labeling conventions. In the third graph depict Marco's PPF using the same labeling conventions.

b. (1 point) Given the above information:

- i. Who has the comparative advantage in the production of radios? _____
- ii. Who has the absolute advantage in the production of radios? _____
- iii. Who has the comparative advantage in the production of zippers? _____
- iv. What is Marco's opportunity cost of producing one zipper? _____

Workspace:

c. (3 points) In the space below draw the joint PPF for Bob, Jane, and Marion given the above information. Measure zippers on the vertical axis and radios on the horizontal axis. Identify all numeric values for intercepts as well as numeric values for any “kink points” that are in your graph.

d. (2 points) Given the above information write the set of equations that describes the joint PPF. For each equation provide the range of zippers for which this equation is true. For full credit show your work.

e. (1.5 points) Given the above information determine if Bob, Jane and Marco can produce the following levels of zippers and radios. Then, determine if the overall level of production described is efficient, inefficient, or not feasible provided that these three individuals specialize according to comparative advantage and trade with one another.

- i. Bob produces 10 zippers, Jane produces 10 zippers, and Marco produces 10 zippers. Bob produces 10 radios, Jane produces 10 radios, and Marco produces 5 radios.

This combination is _____

- ii. Bob produces 20 radios and 0 zippers; Jane produces 0 radios and 20 zippers; and Marco produces 5 radios and 10 zippers.

This combination is _____

- iii. Bob produces 20 radios and 0 zippers; Jane produces 25 radios and 5 zippers; and Marco produces 0 radios and 20 zippers.

This combination is _____

f. (1 point) Given the above information, provide a number line as discussed in class to show the acceptable range of trading prices in terms of radios for 10 zippers from the point of view of Bob and Marco. (Essentially assume that Jane has dropped out of the picture.) In your diagram provide arrows that indicate Bob's and Marco's perspectives on this issue.