

Homework 2

*Due: February 2nd, 2006**Answer Key***Problem 1: Solution 1:**

- (a) Refer to attached figure.
- (b) If wheat production increases from 1200 to 1600, bicycle production decreases from 600 to 300. The opportunity cost is $600-300=300$ units of bicycles.
- (c) Opportunity cost is $\frac{1600-1200}{600-300} = 4/3$ units of wheat.
- (d) One example is 1 unit of bicycle and 1 unit of wheat.
- (e) If PPF is a straight line, it implies the opportunity cost is constant. If it is bowed-out, it implies the opportunity cost is increasing as production increases.

Problem 2: Solution 2: Mexico has absolute advantage in apple production if $x > 25$.

America has comparative advantage in apple production if $\frac{30}{25} < \frac{35}{x} \Rightarrow 30x < 875 \Rightarrow x < \frac{175}{6}$.

Problem 3: Solution 3:

- (a) Refer to attached figure.
- (b) If Illinois produces 150 tons of grain, it requires 750 workers. It will have 250 workers left which can produce 25 TVs. If Wisconsin produces 150 tons of grain, it requires 1500 workers. It will have 500 workers left which can produce 5 units of TV.
- (c) As seen from the figure, Wisconsin has the comparative advantage in grain production and Illinois has the comparative advantage in TV production. Illinois and Wisconsin needs 300 tons of grain in total. Therefore Wisconsin will devote all its resources to produce grain. Wisconsin can produce 200 tons of grain, the remaining 100 tons will be produced by Illinois. To produce 100 tons of grain, Illinois requires 500 workers. The remaining 500 workers can produce 50 TVs.
- (d) Since Illinois is more productive in producing both TVs and grain compared to Wisconsin, it has absolute advantage in both productions. Illinois has comparative advantage in TV production. Wisconsin has comparative advantage in grain production.
- (e) Refer to the attached figure.

Problem 4: Solution 4:

- (a) Positive
- (b) Normative
- (c) Positive
- (d) Normative

