Ricardian Model: Practice Problem Key
International Trade
John T. Dalton

Question 1

a) The USA has the absolute advantage in both goods X and Y, because the USA requires fewer resources, hours, to produce each good.

b) For Mexico, \( \frac{P_X^A}{P_Y^A} = \frac{6}{4} = 1.5 \), and, for the USA, \( \frac{P_X^A}{P_Y^A} = \frac{3}{3} = 1 \).

c) |     | TVs (X) | Computers (Y) |
    |-----|--------|--------------|
    | Mexico | \( \frac{6}{4} = 1.5 \) | \( \frac{4}{6} = \frac{2}{3} \) |
    | USA    | \( \frac{3}{3} = 1 \)   | \( \frac{3}{3} = 1 \)   |

d) The USA has a comparative advantage in good X, because its opportunity cost is lower \((1 < 1.5)\). Mexico has a comparative advantage in good Y, because its opportunity cost is lower \((\frac{2}{3} < 1)\).

e) See Figure 1 below.

f) \( 1 < \frac{P_{TOT}^X}{P_{TOT}^Y} < 1.5 \)

The TOT must lie between the autarky price ratios. If 1 TV exchanges for less than 1 computer, then the USA will not have an incentive to engage in trade. If 1 TV exchanges for more than 1.5 computers, then Mexico will not have an incentive to engage in trade.

g) For the USA to export good X, the following condition should hold:
\[
3 \cdot W^{US} < E \cdot 6 \cdot W^M
\]
For Mexico to export good Y, the following condition should hold:
\[ E \cdot 4 \cdot W^M < 3 \cdot W^{US} \]

Rewriting both of these conditions in terms of \( \frac{W^{US}}{E \cdot W^M} \) and combining them yields

\[ \frac{4}{3} < \frac{W^{US}}{E \cdot W^M} < 2 \]

**Question 2**

a) d

b) a

c) c

d) b

e) d
Figure 1: USA and Mexico PPFs