EC 380 Problem Set 01

Instructions: Answers must be submitted online through the designated Canvas assignment. This Problem Set is due on **October 11 at 01:59pm**. Please write as legible and clearly as possible. You will not be given full credit if your answers cannot be easily understood.

Questions

1. [12 points] Answer the following short questions:
   (a) [4 points] How is the Trade to GDP ratio measured?

$$\frac{Imp + Exp}{GDP}$$

   (b) [4 points] How do people/labor flows impact trade integration? Why?

Trade integration ↑

Why: Your argument

   (c) [4 points] Have trade frictions **increased or decreased** over time? How does that impact trade flows?

Decreased

↳ Lower Costs of trade = More Trade

2. [18 points] Suppose we are considering a **Ricardian Model** setting, where countries have not yet opened up to trade. Two goods are produced exclusively by domestic labor supplies, Rubber Ducks and Bath Bombs. Home and foreign produce both goods as in the table below. The two countries have a labor pool $\bar{L} = 50$ each, which means there is no difference in their labor endowments.

	Rubber Ducks (X)	Bath Bombs (Y)
Home	12	10
Foreign	14	8

Consider the autarky scenario where neither country exchange goods. Complete the following questions to obtain the two countries consumption and production equilibria.

(a) [2 points] Which country has **comparative advantage in producing Bath Bombs**?

$OC^H_{BB} = \frac{MPL^H_{RD}}{MPL^H_{BB}} = \frac{12}{10} = 1.2$

$OC^F_{BB} = \ldots = \frac{14}{8} > 1.2$

Comp. Adv in BB is for Home

(b) [2 points] What is the **price of Rubber Ducks** in each country?

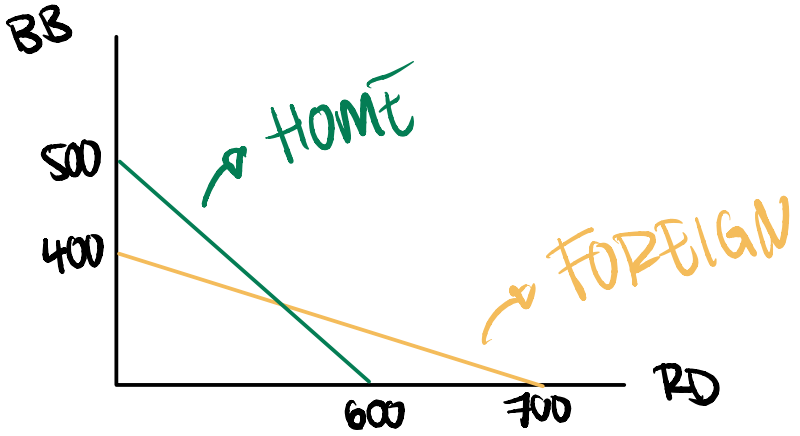
$OC^H_{RD} = \frac{10}{12} =$ Prices

$OC^F_{RD} = \frac{8}{14} =$ Prices

(c) [2 points] What are the **maximum quantities of each good** that Home and Foreign can produce? (Fill in the table)

	Rubber Ducks	Bath Bombs
Home	12×50	10×50
Foreign	14×50	8×50

(d) [4 points] Sketch the PPFs for **both countries** in a single graph. Be sure to correctly label the graph for full credit.



(e) [4 points] What should be the **World Price of Rubber Ducks**?

$$P^F_{RD} = \frac{8}{14} < P^W_{RD} < \frac{10}{12} = P^H_{RD}$$

(f) [4 points] Suppose Home prefers to consume **5 Rubber Ducks** for every **2 Bath Bombs**. Calculate the consumption bundle of Home.

$BB = 500 - \frac{10}{12} RD$

PPF

$\frac{RD}{BB} = \frac{5}{2} \rightarrow BB = \frac{2}{5} RD$

$\frac{2}{5} RD = 500 - \frac{10}{12} RD$

$RD = 405.41$

$BB = \frac{2}{5}(405.41) = 162.16$