Reciprocal Dumping Problem

Consider two countries (Country 1 and Country 2) and two firms (Firm 1 and Firm 2) that produce a homogeneous product. Firm 1 is from country 1 (i.e. produces in country 1 and its owners are from country 1) and Firm 2 is from country 2 (i.e. produces in country 2 and its owners are from country 2).

Firms sell both at home and abroad.

Both markets have identical demands given below:

\[ p_1 = 100 - q_1 \quad \text{and} \quad p_2 = 100 - q_2 \]

(where p’s and q’s denote the price and total quantities in each country).

Assume that the marginal costs of production are \( MC_1 = 10 \), \( MC_2 = 10 \) and that transport costs in either direction are 6 dollars per unit. (i.e. \( \tau = 6 \)).

Assume firms choose quantities in both markets simultaneously.

1. Calculate the NE in quantities (you need to calculate the amounts each firm would sell in each market.)

2. Are firms dumping their products in each other’s markets? Justify

3. Calculate Total Welfare for Country 1