

Setup

The questions for the following solutions are available on Canvas under ‘practice-prob.pdf’. The details surrounding reaching each of these answers can be discussed during email/office hour correspondence.

Tariff Theory

| Q1. | Price | Q_d | Q_s | Imports | CS | PS | GS | Welfare | Eff.Loss | DWL |
|------------|-------|-------|-------|---------|--------|--------|-------|---------|----------|------|
| Autarky | 166. | 348. | 348. | 0 | 25923. | 20162. | 0 | 46085. | 0 | 0 |
| Free Trade | 120 | 455 | 210 | 245 | 44363. | 7350 | 0 | 51713. | 0 | 0 |
| Tariff | 148 | 390. | 294 | 95.7 | 32537. | 14406 | 2679. | 49622. | 1176 | 915. |

| Q2. | Price | Q_d | Q_s | Imports | CS | PS | GS | Welfare | Eff.Loss | DWL |
|------------|-------|-------|-------|---------|--------|--------|------|---------|----------|-----|
| Autarky | 166. | 218. | 218. | 0 | 11857. | 14821. | 0 | 26678. | 0 | 0 |
| Free Trade | 85 | 380 | 88 | 292 | 36100 | 2420 | 0 | 38520 | 0 | 0 |
| Tariff | 110 | 330 | 128 | 202 | 27225 | 5120 | 5050 | 37395 | 500 | 625 |

| Q3. | Price | Q_d | Q_s | Imports | CS | PS | GS | Welfare | Eff.Loss | DWL |
|------------|-------|-------|-------|---------|--------|-------|-------|---------|----------|------|
| Autarky | 350 | 100 | 100 | 0 | 10000 | 12500 | 0 | 22500 | 0 | 0 |
| Free Trade | 190 | 180 | 36 | 144 | 32400 | 1620 | 0 | 34020 | 0 | 0 |
| Tariff | 235 | 158. | 54 | 104. | 24806. | 3645 | 4658. | 33109. | 405 | 506. |

| Q4. | Price | Q_d | Q_s | Imports | CS | PS | GS | Welfare | Eff.Loss | DWL |
|------------|-------|-------|-------|---------|-------|-------|------|---------|----------|------|
| Autarky | 72.7 | 87 | 87 | 0 | 3364 | 2944. | 0 | 6308. | 0 | 0 |
| Free Trade | 35 | 129. | 38.6 | 90.8 | 7439. | 579. | 0 | 8018. | 0 | 0 |
| Tariff | 50 | 112. | 57.9 | 54.6 | 5625 | 1302. | 820. | 7746. | 145. | 127. |

Q5. Consider a final good tariff of 12 percent and an input good tariff of 37 percent.

| Variable | No Tariff | + Tariff on Final Good | + Tariff on Input Good |
|---------------------------------|-----------|------------------------|------------------------|
| Price of Domestic Final Good | 2870 | 3214. | 3214. |
| Value of Imported Inputs | 870 | 870 | 1192. |
| Domestic Value-Added | 2000 | 2344. | 2022. |
| Effective Rate of Protection, % | 0 | 17.2 | 1.12 |

Q6. Consider a final good tariff of 17 percent and an input good tariff of 20 percent.

| Variable | No Tariff | + Tariff on Final Good | + Tariff on Input Good |
|---------------------------------|-----------|------------------------|------------------------|
| Price of Domestic Final Good | 1910 | 2235. | 2235. |
| Value of Imported Inputs | 430 | 430 | 516 |
| Domestic Value-Added | 1480 | 1805. | 1719. |
| Effective Rate of Protection, % | 0 | 21.9 | 16.1 |

Q7. Consider a final good tariff of 10 percent and an input good tariff of 5 percent.

| Variable | No Tariff | + Tariff on Final Good | + Tariff on Input Good |
|---------------------------------|-----------|------------------------|------------------------|
| Price of Domestic Final Good | 4830 | 5313 | 5313 |
| Value of Imported Inputs | 2415 | 2415 | 2536. |
| Domestic Value-Added | 2415 | 2898 | 2777. |
| Effective Rate of Protection, % | 0 | 20 | 15 |

Balance of Payments

| ID | Description | Q8. | Q9. |
|-----|--|------|--------|
| 1. | Current Account Balance | -550 | -1830 |
| 2. | Capital Account Balance | 100 | 290 |
| 3. | Financial Account | | |
| 3a. | Net acq of financial assets, excl financial der (increase/outflow (+)) | 870 | 7000 |
| 3b. | Net inc of liabilities, excl financial der (increase/inflow (+)) | 1200 | -6300 |
| 3c. | Net change in financial derivatives | -80 | -14780 |
| 4. | Statistical Discrepancy | -40 | -60 |
| 5. | Memoranda | | |
| 5a. | Balance on current and capital accounts | -450 | -1540 |
| 5b. | Balance on financial account | -410 | -1480 |

Both balances are maintain current account deficits since their respective current account values are negative. This would imply both countries function as net borrowers, which is a status reflected by negative financial account balances.

Exchange Rates

Q10.

| Exchange Rate | Currency Reserve | %Δ ExR |
|---------------|------------------|--------|
| 11.0 | ≈753 | |
| 11.4 | ≈781 | 2.98 |

Q11.

| Exchange Rate | Currency Reserve | %Δ ExR |
|---------------|------------------|--------|
| 110 | ≈240 | |
| 88.9 | ≈314 | -19.4 |

Q12.

| Exchange Rate | Currency Reserve | %Δ ExR |
|---------------|------------------|--------|
| 489 | 13.1 | |
| 439 | 14.5 | -10.3 |