

Suppose that our domestic supply and demand of shirts are described by two equations, $Q_S = 100 + 20P$ and $Q_D = 1800 - 40P$. Quantities are in millions.

1. Solve for the autarky price and quantity.

Assume that our country is a very small part of the world shirt market, and the world price P^* for shirts is \$15.

2. Solve for domestic P , Q_S and Q_D , and the number of imported shirts. On a supply and demand graph, show the free trade equilibrium.

3. Suppose that our government imposes a \$5 tariff on imported shirts. Solve for the new domestic P , Q_S and Q_D , and the new number of imported shirts. Show this on your graph for #2 above.

4. Solve for welfare effects of the tariff, i.e., the changes in consumer surplus, producer surplus, and the government budget. What is the total change in our country's welfare?

Assume instead that our country is a large part of the world shirt market, and the world's export supply to our country is $X_S^* = 100P^* - 700$.

5. Calculate our import demand function, and solve for free trade equilibrium and the terms and volume of trade. Show this equilibrium on the appropriate graph.

6. Solve for the new free trade equilibrium in the domestic market, i.e., Q_S and Q_D .

7. Suppose that our country now imposes an \$8 tariff on imported shirts. Solve for the new world price P^* , the new domestic P , Q_S and Q_D , and the new number of imported shirts. Show this on your graph in #5.

8. Relative to the free trade equilibrium in #6, solve for welfare effects of the tariff in the large country case, i.e., the changes in our consumer surplus, producer surplus, and government budget. What is the total change in our country's welfare?

9. What is net welfare effect for the tariff for the rest of the world, i.e. foreign export suppliers? What is the net welfare effect for the world in this case?