There are two goods: computers and bananas. Both use labor and another factor that is specific to that sector (computer fabrication plants, and land suitable for banana plantations).

Compared to the rest of the world, Guatemala is relatively abundant in land suitable for banana plantations. That is, Guatemala has few computer plants and lots of banana growing land, while the rest of the world has lots of computer plants and little banana growing land. (Hint: In the questions below you need to use this information to figure out Guatemala's comparative advantage and disadvantage goods, and what this implies for Guatemala's autarky prices compared to the rest of the world.)

Finally, Guatemala is a very small country. This means that world prices for computers and bananas are unaffected by changes in Guatemala's supply and demand for these goods. Initially the world prices are: computer = $1000. bunch of bananas = $10.

1. (10 pts) Suppose Guatemala has extremely high tariffs and so is in autarky. Draw a partial equilibrium supply-demand diagram for computers in Guatemala. Label consumer surplus and producer surplus.

2. (15 pts) Suppose Guatemala drops all its tariffs to zero. Redraw the graph above, and include the world price for computers.
a. What is the new price of computers in Guatemala?
b. Show how domestic output and domestic demand for computers have changed. Show the quantity of imports.
c. How have consumer surplus, producer surplus, and tariff revenue (if any) in the computer sector changed as a result of the move from autarky to free trade?
d. How is aggregate welfare in the economy affected by the move from autarky to free trade?

3. (15 pts) Redraw the graph in 2, and now have Guatemala place a specific tariff = $100 per computer.
a. What is the new price of computers in Guatemala?
b. Show how domestic output and domestic demand for computers have changed. Show the quantity of imports.
c. How have consumer surplus, producer surplus, and tariff revenue (if any) in the computer sector changed as a result of the move from a zero tariff to a specific tariff = $100?
d. How is aggregate welfare in the economy affected by imposing the tariff?

4. (10 pts) Is the tariff surprising from the perspective of a "median voter" theory of trade policy? Why or why not?

5. (10 pts) In Guatemala what happens to the return on investment in computer fabrication plants relative to the return on investment in banana plantations?

Same model (computers, bananas) but now look at this from the perspective of the US. The US is abundant in computer fabrication plants relative to banana plantation land. It is also a large country, so that changes in its supply and demand can move world prices.

6. (10 pts) Starting from free trade, the US places a specific tariff of $1 on bananas.

a. Does the world price of bananas go up? Down? Stay unchanged? Why?
b. What happens to the domestic price of bananas in the US ? (Hint: up/down? Up by more/less than a dollar? Down by more/less than a dollar?)

7. (10 pts) Welfare:
a. Is it possible for the banana tariff to make the US better off? How?
b. What does the US banana tariff do to welfare in Guatemala? Why?

8. (10 pts) Can Guatemala effectively retaliate? Explain.

9. (10 pts) The US decides to heavily subsidize the output of bananas so that the domestic price inclusive of the subsidy is $8.
a. Draw a partial equilibrium supply-demand diagram showing the US banana market with the subsidy. Show the quantity supplied and demanded domestically, and imports if any. Be sure to include and label the original world price of bananas ($10) on the graph.
b. What should happen to world prices of bananas?
c. France is a banana importer. Should they be happy or unhappy about the US subsidy?
d. Should Guatemala be happy or unhappy about the US subsidy?