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**1: Offshoring**

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- (a) Without trade, Country A produces components at  $(\frac{P_c}{P_r})^A = 3$ , where  $P_r$  is the price of R&D. Likewise, country B produces components at  $(\frac{P_c}{P_r})^B = 1$ . Draw the PPF for both countries on separate graphs with components on the x-axis. Make sure to label the consumption and production points.
- (b) Assume trade begins. On both graphs, show the result that trade will have on these countries. Make sure to mark the new consumption and production points. Make sure to label the gains of trade using isoquants.
- (c) Now look at the countries, Home and Foreign. Home offshores production tasks to Foreign. With the relative high skilled wage on the y-axis and the relative amount of high skilled labor on the x-axis, draw the supply and demand of relative high skilled labor for both countries in separate graphs.
- (d) Assume trade costs go down. So, this change on both graphs from part c. Make sure to label the new equilibrium points. What is the effect on the relative high skilled wage and the relative high skilled employment in each country.
- (e) A large amount of low skilled laborers come into Home from some third country. Will this change the equilibrium points from part d? Why or why not?

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**2: Tariffs and Quotas in Perfect Competition**

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- (a) Home sells widgets in their own country. The demand for widgets is  $D = 200 - 4P$ . The supply for widgets is given by  $S = P - 20$ . Graph supply and demand with price on the y-axis and quantity on the x-axis. Be sure to specifically label the equilibrium price and quantity. Also, find the consumer surplus and producer surplus.
- (b) Assume Home is a small country. Trade begins and the foreign export supply such that the world price is 30. Update the graph from part a and draw the Import market. Find the consumer surplus and producer surplus at home. How much is being imported. Is home better off? Why or why not.
- (c) Now suppose Home places a tariff of 5 dollars to every unit imported into the Home country. Find the deadweight loss, consumer surplus, producer surplus, and tariff revenue. Label the areas on the graph for part b. Suggest a quota that would have the same effect as the tariff.
- (d) Now assume that Home is a large country. The country faces a foreign export supply that can be described as  $P = 10 + 2EX$ . Find the equilibrium world price. Redraw the home market and world market.
- (e) Home adds a tariff of 4 dollars to every unit imported. Show this change on the graphs from part d. Find the values of CS, PS, DWL, tariff revenue, and terms of trade gain.