Section Exercise 4

1)

Consider the market for fish tacos in a seaside town. For the sake of argument, let's assume that the market is perfectly competitive. Say that there is bigger than usual fish catch this month, so that the price of fish (a key input in fish tacos) falls substantially.

a) Let's analyze this in a supply and demand model. How and to what extent is this shock likely to change the price of fish tacos, according to the model? How would this depend on price elasticities? Answer with diagram(s) and a few sentences of explanation.

b) If the price of fish tacos had been restricted to stay at its original level even after the shock, what would the supply and demand model predict then? Again, please answer with diagram(s) and explanation of the relevant changes.

2)

Consider a perfectly competitive market in which demand is given by $Q_D = 65 - P_D$ and supply is given by $Q_S = 2P_S - 10$.

a) What is the equilibrium price and quantity traded in this market? Explain in words what we mean by 'equilibrium' in this context.

b) Say that a price ceiling of $20 is imposed (that is, this good cannot be traded at a price above $20). How many units are traded? Sketch a diagram of this situation. Your diagram should show the demand and supply curves, including their intercepts, the coordinates of any relevant points, and consumer surplus, producer surplus, and, if applicable, deadweight loss. (You don't have to calculate these, just show them on the diagram).

3)

Two questions about perfectly competitive markets with a downward-sloping demand curve. Assume that the markets reach equilibrium when possible.

a) The market for product X is initially in equilibrium. Then a price ceiling (below the equilibrium price) is imposed, but the quantity traded does not change. What must the supply curve look like? Sketch a diagram that illustrates this situation. Is there deadweight loss or not, and why?

b) In the market for product Y there is a sudden fall in the marginal cost of production. The price of product Y falls, but by a very small amount, much smaller than the fall in costs. What must the demand curve look like and what does that mean in words? Sketch a diagram that illustrates this situation.