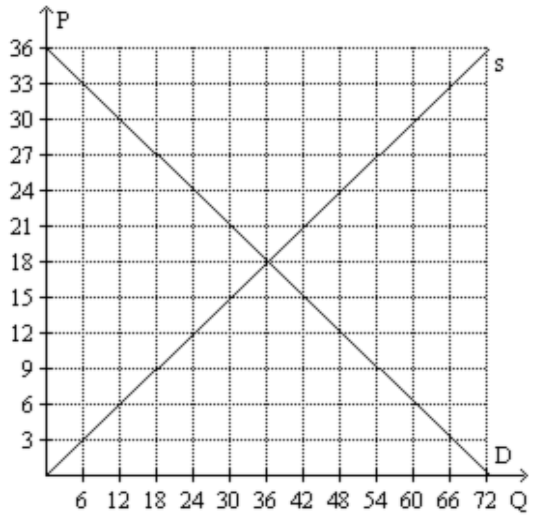
Week 7 Discussion Section

Part 1

Figure 1: The market for good x



Consider the market depicted in **Figure 1**. Suppose the government imposes a price ceiling of $12 on this market.

1. Determine the price and quantity sold in the market under the price ceiling.

2. Is this price and quantity sold efficient? Explain why or why not.

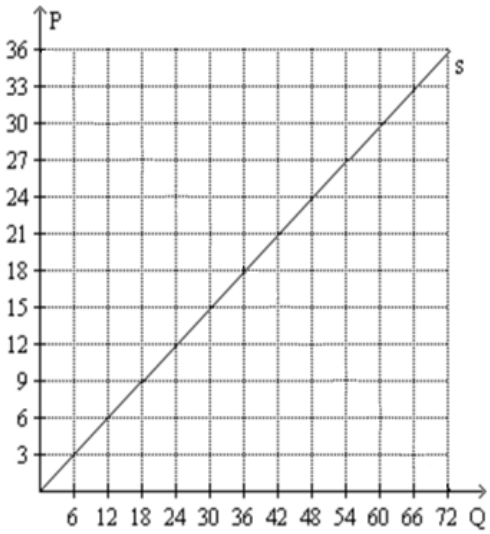
Consider the market depicted in **Figure 1** and suppose that demand shifts such that consumers wish to purchase 12 fewer units at every price.

3. How much will producer surplus change as a result of this decrease in demand?

4. How much of this change in producer surplus is from a change in the number of producers?

Part 2

Figure 2: The supply of good



Consider the market depicted in **Figure 2** and suppose that buyers will purchase 36 units no matter what the price of the good is.

5. What kind of demand curve does the market have?

6. Suppose a tax of $12 per unit was applied to sellers in the market for good x, will there be any deadweight loss from this tax? Explain.

Part 3

Suppose the market demand and market supply curves are given by the equations:

$$Q^D = 200 - P$$
$$Q^S = 3P$$

The equilibrium price in this market is $P = \$50$ and the equilibrium quantity is $Q = 150$ units.

**Hint: I recommend sketching the demand, supply and other related functions as you solve the following questions.*

7. Solve for the consumer and producer surplus at the market equilibrium.

Suppose the government decides to impose a per-unit tax of $40 on buyers in this market.

8. Update the demand curve to reflect this tax.

9. Solve for the equilibrium under the tax: P_B, P_S, and Q_T.

10. Determine the consumer surplus, producer surplus, tax revenue, and deadweight loss under the tax.