# APEC 3001 Discussion

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# Today's Agenda

1. Housekeeping
2. Practice Problems
3. Questions

# Housekeeping

- State your presence in the Zoom chat for a record of attendance
- Take a minute to download these slides from Canvas under Week 2
- First problem set posted and due this Thursday (Feb. 4th)
- Follow link in TA bio on course Canvas page to sign up for Wednesday office hours
- Feedback on class logistics?

## Practice Problems

Suppose the inverse demand curve is given by $P = 10 - Q_D$ and the inverse supply curve is given by $P = 2 + 3Q_S$

1. Solve for the equilibrium price and quantity
2. Draw a graph illustrating the inverse demand and supply curves
3. Derive the equations for the demand and supply curves
4. Calculate the price elasticities of demand and supply at the equilibrium
5. Calculate the consumer and producer surplus

## Practice Problems

Suppose that the supply of lemonade is represented by $Q_S = 40P$, where $Q$ is measured in pints and $P$ is measured in cents per pint.

1. If the demand for lemonade is $Q_D = 5,000 - 10P$, what are the current equilibrium price and quantity?

2. Suppose that a severe frost in Florida raises the price of lemons and thus the cost of making lemonade. What effect will this frost have on the supply and/or demand curves, if any?

3. In response to the increase in cost, producers reduce the quantity supplied of lemonade by 400 pints at every price. What is the new equation for the supply of lemonade?

4. After the frost, what will the equilibrium price and quantity of lemonade be?

## Practice Problems

Suppose the demand for down pillows is given by $Q_D = 100 - P$, and that the supply of down pillows is given by $Q_S = -20 + 2P$

1. Solve for the equilibrium price and quantity
2. Solve for the price elasticities of demand and supply at the equilibrium
3. Is supply or demand more elastic?
4. Derive the inverse demand and inverse supply curves and graph them
5. How do the equilibrium and price elasticities depicted by the graph compare to the equilibrium and price elasticities of the demand and supply curves?

## Practice Problems

The Ministry of Tourism in the Republic of Palau estimates that the demand for its scuba diving tours is given by $Q_D = 6,000 - 20P$, where $Q$ is the number of divers served each month and $P$ is the price of a two-tank dive. The supply of scuba diving tours is given by $Q_S = 30P - 2,000$

1. Solve for the equilibrium price and quantity
2. Graph the demand and supply curves
3. Calculate the consumer surplus and producer surplus
4. Suppose the demand for scuba diving services increases, and the new demand is given by $Q_D = 7,000 - 20P$. Calculate the impact of this change in demand on equilibrium price and quantity, and consumer and producer surplus

# Questions

Any remaining questions?

# Additional Support Resources

- Boynton Mental Health Services
- Student Counseling Services
- Let's Talk
- Educational Workshops
- Academic Skills Coaching