CONCEPT: QUANTITATIVE ANALYSIS OF TAXES

- We can use algebra to determine the effect of a tax.
  - □ To find the new equilibrium quantity and price with a tax:
    - Step 1: Replace P with (P – Tax) in the supply OR P with (P + Tax) in the demand
    - Step 2: Solve for the new equilibrium by setting $Q_D = Q_S$ using the new equation.
    - Step 3: The equilibrium price is the amount paid/received by the non-taxed party.
    - Step 4: Solve for remaining price paid/received
      - > If consumer taxed, add tax to new equilibrium price to find price consumers pay.
      - > If producer taxed, subtract tax from new equilibrium price to find price producers receive.

EXAMPLE: The original supply and demand curves are as follows. What is the new equilibrium price and quantity if suppliers are taxed $1 per unit? What is the amount suppliers receive? What is the amount consumers pay?

$Q_S = 2P – 6$

$Q_D = 10 – P$

P* =	**Q* =**	**Suppliers Receive =**	**Consumers Pay =**

PRACTICE: The supply and demand curves for a product are as follows. What is the amount suppliers receive if a $0.50 tax is imposed upon consumers?

a) $2.80
b) $3.00
c) $3.20
d) $3.30
e) $3.50

$Q_D = 600 – 100P$

$Q_S = -150 + 150P$