

CONCEPT: QUANTITATIVE ANALYSIS OF PRICE CEILINGS AND PRICE FLOORS: FINDING POINTS

- We are sometimes asked to calculate quantity supplied and quantity demanded with price floors and ceilings.

□ Steps for calculating quantity supplied and quantity demanded with price floors and ceilings:

- Step 1: Find Equilibrium Price and Quantity by setting $Q_D = Q_S$
- Step 2: Confirm that the price floor/ceiling is “effective”
 - > A price ceiling must be _____ equilibrium price to be effective
 - > A price floor must be _____ equilibrium price to be effective
- Step 3: If effective, plug the floor/ceiling price into each equation and solve for Q_D and Q_S
- Step 4: If not effective, the answer is the equilibrium price and quantity

EXAMPLE: Calculate quantity supplied and quantity demanded if a price ceiling of \$1,000 was put into effect.



$$Q_D = 3,000,000 - 1,000P$$

$$Q_S = 1,300P - 450,000$$

PRACTICE: The supply and demand curves for a product are as follows. What is quantity demanded if a price floor of \$21 is set?

- a) 2
- b) 3
- c) 4
- d) 5
- e) 6

$$Q_D = 45 - 2P$$

$$Q_S = -15 + P$$

PRACTICE: The supply and demand curves for a product are as follows. What is quantity supplied if a price ceiling of \$4 is set?

- a) 150
- b) 200
- c) 300
- d) 450
- e) 600

$$Q_D = 600 - 100P$$

$$Q_S = -150 + 150P$$