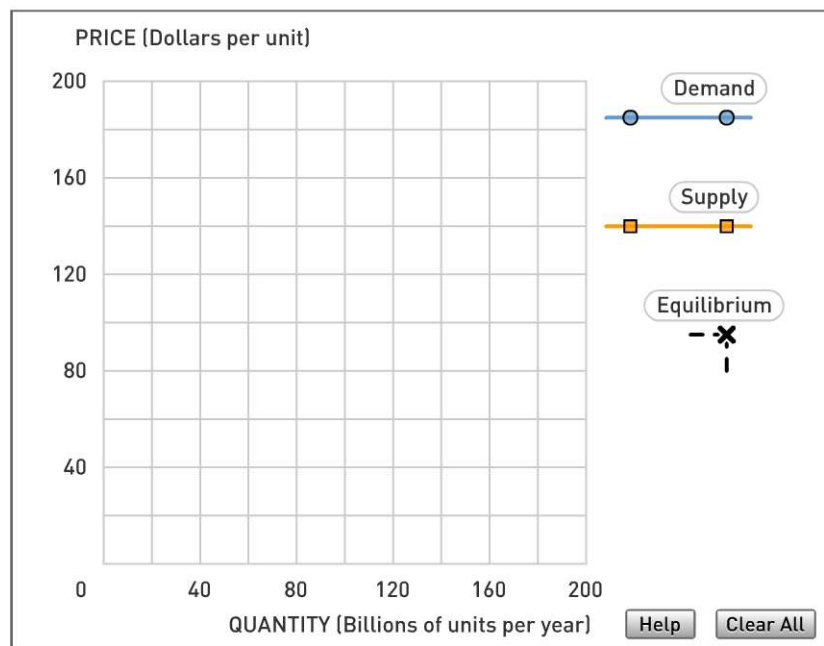


#### 4. Market equilibrium - An algebraic approach

Suppose the supply of a good is given by the equation  $Q^S = -40 + 2P$ , and the demand for the good is given by the equation  $Q^D = 280 - 2P$ , where quantity (Q) is measured in billions of units per year and price (P) is measured in dollars per unit.

The equilibrium quantity in this market is \_\_\_\_\_ units per year, and the equilibrium price is \_\_\_\_\_ per unit.

On the following graph, plot the demand curve using the blue line (circle symbols) and plot the supply curve using the orange line (square symbols). Then place a black point (X symbol) at the equilibrium price and quantity. Dashed drop lines will automatically extend to both axes.



Now suppose a change in consumer tastes results in a new demand curve given by the equation  $Q^D = 200 - 2P$ . The new equilibrium quantity in this market is \_\_\_\_\_ units per year, and the equilibrium price is \_\_\_\_\_ per unit.