

**Answer on Question #40746 – Economics - Macroeconomics**

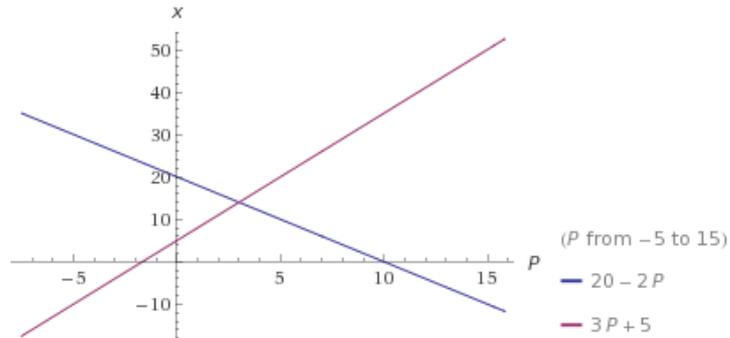
1. The equilibrium price and quantity are in the point where  $Q_d = Q_s$

$$20 - 2P = 5 + 3P$$

$$5P = 15$$

The equilibrium price is  $P = \$3$

The equilibrium quantity is  $Q = 20 - 2 \cdot 3 = 14$  units



2. If the government imposes a tax of \$5.00, the new equilibrium price and quantity will be calculated as follows:

$$Q_d = Q_s(\text{with tax})$$

$$20 - 2P = 5 + 3(P - 5)$$

$$20 - 2P = 3P - 10$$

$$5P = 30$$

The equilibrium price is  $P = \$6$

The equilibrium quantity is  $Q = 20 - 2 \cdot 6 = 8$  units

