

Study Question – Competitive Market

A market is described by these equations:

$$Q_d = 1100 - 5P$$

$$Q_s = -100 + P$$

- a) Calculate the equilibrium price and quantity
- b) Calculate the surplus or shortage if a price ceiling of \$150 is imposed
- c) How much (legal) revenue will sellers have after the price ceiling is imposed?

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$$1100 - 5P = -100 + P \rightarrow 1200 = 6P \rightarrow P = 200 \quad \text{and} \quad Q = -100 + 200 = 100$$

At price of \$150, $Q_d = 1100 - 5(150) = 350$

$$Q_s = -100 + 150 = 50$$

Shortage of 300

Revenue after price ceiling = 50 units sold at \$150 each = \$7500