

Quiz#1
EE320 Introductory Mathematical Economics
Section 046403

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Question 1 (100 points) Given supply and demand model,

$$Q^D = a - bP \quad (1)$$

$$Q^S = -c + dP \quad (2)$$

(1.1) **(20 points)** Find the equilibrium price and quantity.

(1.2) **(60 points)** Suppose that government subsidizes consumers by \$s per unit, what will the new equilibrium price and quantity be? What is the new price consumers pay after subsidy? Verify that the price consumers pay will be the same if the government decides to subsidize producers instead.

(1.3) **(20 points)** Derive the subsidy expenditure function (S) as a function of subsidy per unit (s). Hint: Find total subsidy in term of s .