BROCK UNIVERSITY
ECONOMICS 2P23- 2008 Winter Term
Test # 1

Prof. Kushner **Name:** MASTER

Tutorial No. (or date and time): _____ **Student Number**_____

Tutorial Instructor_____

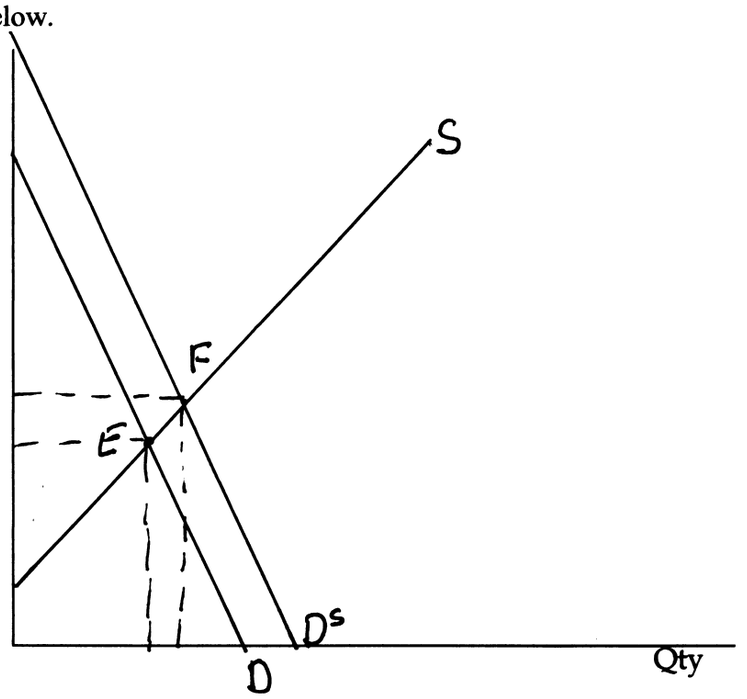
NOTE: All work must be shown on the paper; otherwise the mark will be zero. Whenever possible, use diagrams to illustrate your answer.

Health Canada has decided that physical workouts are good for your health. Accordingly is proposing that a $ 15.00 per unit subsidy be given to those who purchase memberships in health clubs. What are the economic effects of such a subsidy?

The demand and supply equations are given below.

$P = 200 - 2Q_d$ (1)

$P = 50 + Q_s$ (2)



Solving for (1) and (2)

$200 - 2Q_d = 50 + Q_s$

$3Q_s = 150$

$Q_s = 50$ (3)

$P = 200 - 2(50)$

$= \$100$ (4)

With subsidy D1

$P = (200 + 15) - 2Q_d$ (10)

Solving for (10) and (2)

$215 - 2Q_d = 50 + Q_s$

$3Q_s = 165$

$Q_s = 55$ (11)

(11) into (1) $P = 200 - 110 = \$90$ (12)

∴ consumer benefits $10

producer " $5

Original price 100 (1) Original output 50 (1)

New price 90 (1) New output 55 (1)

Benefit to consumer 10 (2) Benefit to producer 5 (2)

Total government cost of subsidy 15(55) = $825 (2)

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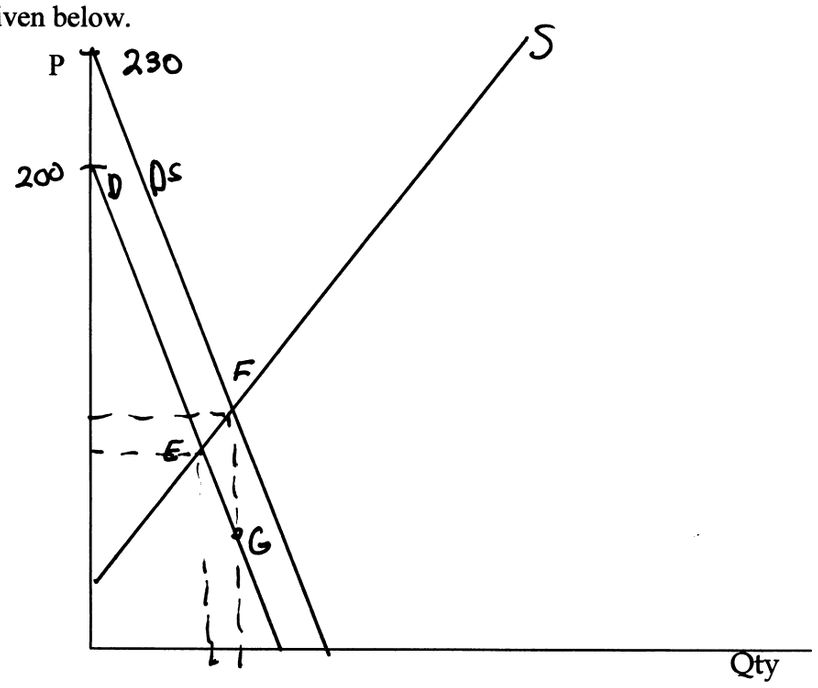
NOTE: All work must be shown on the paper; otherwise the mark will be zero. Whenever possible, use diagrams to illustrate your answer.

Health Canada has decided that physical workouts are good for your health. Accordingly is proposing that a $ 30.00 per unit subsidy be given to those who purchase memberships in health clubs. What are the economic effects of such a subsidy?

The demand and supply equations are given below.

$P = 200 - 2Q_d$ (1)

$P = 50 + Q_s$ (2)



$200 - 2Q_d = 50 + Q_s$

$3Q_s = 150$

$Q_s = 50$

$P = 200 - 2(50) = \$100$

With subsidy, D↑

$P = (200+30) - 2Q_d$ (1)

Solving for (1) and (2)

$230 - 2Q_d = 50 + Q_s$

$3Q_s = 180$

$Q_s = 60$

$P = 200 - 2(60)$

$= \$80$

∴ cons. benefits $20, producer $10

Original price 100 Original output 50

New price 80 New output 60

Benefit to consumer 20 Benefit to producer 10

Total government cost of subsidy 30(60) = $1800

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Quiz 1

Prof. R. Koehn – Lec 2 – TH242
(Mon, Wed, Fri – 2:00 to 3:00 p.m.)

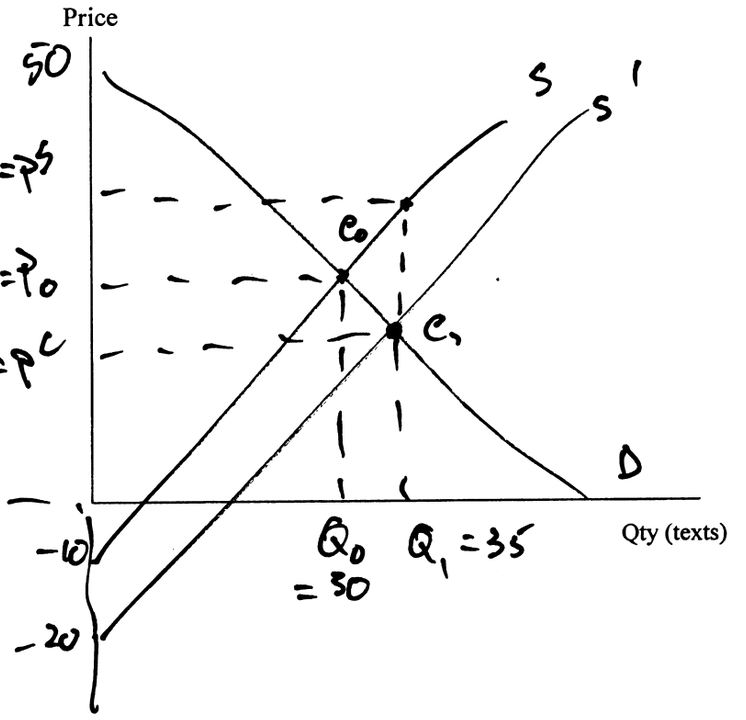
Name: _____ Tutorial Day & Time: Master

Tutorial #_____ Student No. : _____

Note: All work must be shown on the paper; otherwise the mark will be zero. Whenever possible use diagrams to illustrate your answer.

The government wishes to encourage students to become more literate in economics and is therefore giving a $10 per unit subsidy to the publishers of the textbooks. Given the following demand and supply, what are the economic effects of this subsidy?

P = $50 - Qd (1)
P = $-10 + Qs (2)



initial equilibrium.

$50 - Q_0 = -10 + Q_0$

$60 = 2Q_0$

$Q_0 = 30$

$P_0 = 50 - 30$

$= 20$

new supply equation

$P = -10 - 10 + Q_S$

$= -20 + Q_S$

$\therefore 50 - Q_1 = -20 + Q_1$

$70 = -2Q_1$

$Q_1 = 35$

$P^C = 50 - 35$

$= 15$

$P^S = -10 + 35$

$= 25$

Original price	20 (1)	Original output	30 (1)
New price	15 (2)	New output	35 (2)
Benefit to consumer	5 (2)	Benefit to producer	5 (2)

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The government wishes to encourage students to become more literate in economics and is therefore giving a $10 per unit subsidy to the buyers of the textbooks. Given the following demand and supply, what are the economic effects of this subsidy?

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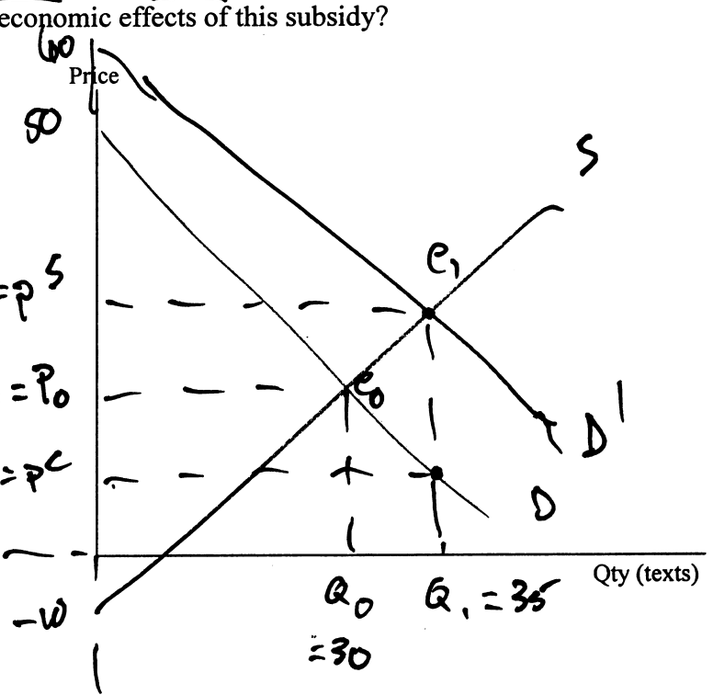

Initial equilibrium

$50 - Q_0 = -10 + Q_0$

$60 = 2Q_0$

$Q_0 = 30$

$P_0 = 50 - 30$

$= 20$

New demand equation

$P = 50 + 10 - Qd$

$= 60 - Qd$

$\therefore 60 - Q_1 = -10 + Q_1$

$70 = 2Q_1$

$Q_1 = 35$

$P^C = 50 - 35$

$P^C = 15$

$P^S = -10 + 35$

$= 25$

Original price	20	(1)	Original output	30	(1)
New price	15	(2)	New output	35	(2)
Benefit to consumer	5	(2)	Benefit to producer	5	(2)