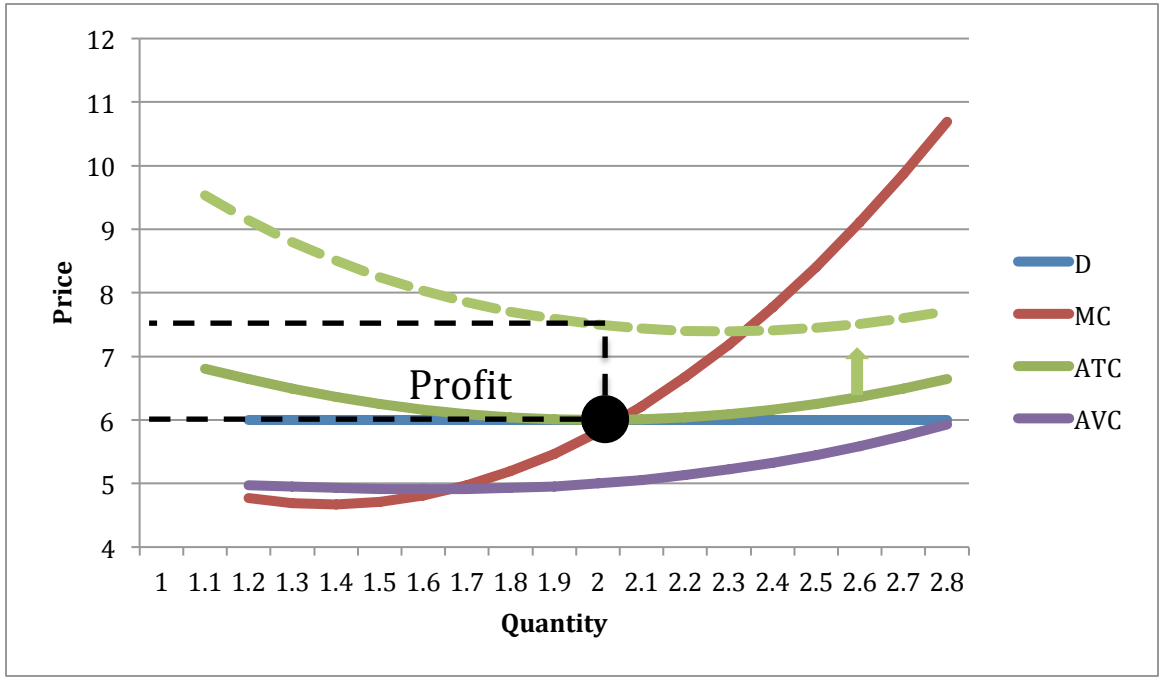
You own a company that makes plastic grocery store bags in a perfectly competitive market. The local government has decided to levy a lump-sum tax (a fixed cost) on all businesses in the city in order to raise money for the school system. You cannot avoid paying the tax without going out of business. Illustrate on a graph the effect of the tax in the short run.


12
11
10
9
8
7
6
5
4
Price
Profit
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8
Quantity
D
MC
ATC
AVC

The following table gives the marginal utility of John's consumption of three goods: A, B, and C.

Units	MU of A	MU of B	MU of C
1	20	25	45
2	18	20	30
3	16	15	24
4	14	10	18
5	12	8	15
6	10	6	12

a. Good A costs $2 per unit, good B costs $1, and good C costs $3. How many units of each good should John buy with $12 to maximize his utility?

Answer: From the information in the table, the marginal utility per dollar is as follows:

Units	MU/P of A	MU/P of B	MU/P of C
1	10	25	15
2	9	20	10
3	8	15	8
4	7	10	6
5	6	8	5
6	5	6	4

There are three bundles that have equal $\frac{MU}{P}$. They are (1, 4, 2), (3, 5, 3), and (5, 6, 4). With $12 to spend, John can only afford the (1, 4, 2) bundle, which costs exactly $12.