

1. Suppose that Comcast has a cable monopoly in Philadelphia. The following table gives Comcast's demand and costs per month for subscriptions to basic cable (for simplicity, let's keep the number of subscribers artificially small).

Price	Quantity	Total Cost
\$17	3	\$56
16	4	63
15	5	71
14	6	80
13	7	90
12	8	101

1. What is the optimal number of subscriptions Comcast should sell?
 - a) 5
 - b) 6**
 - c) 7
 - d) 8
2. What is the price that Comcast will charge for their subscription?
 - a) \$15
 - b) \$14**
 - c) \$13
 - d) \$12
3. What is Comcast's profit?
 - a) \$1
 - b) \$2
 - c) \$3
 - d) \$4**
4. Suppose the state government imposes a \$2.50 month tax on cable companies (Comcast included). What price should Comcast now charge? How many subscriptions should it sell? And What will its profit be? (in the respective order)
 - a) \$15, 5, \$1.00
 - b) \$14, 6, \$1.50**
 - c) \$13, 7, \$2.00
 - d) \$12, 8, \$2.50

Price	Quantity	TR	MR	TC	MC
\$17	3	\$51	--	\$56	--
16	4	64	\$13	63	\$7
15	5	75	11	71	8
14	6	84	9	80	9
13	7	91	7	90	10
12	8	96	5	101	11

Questions 1-3

We know that Comcast will maximize profits by selling subscriptions up to the point where $MR = MC$. In this case, that means selling 6 subscriptions per month and charging \$14 per subscription. Comcast's profit will be \$4 per month.

Questions 4

This tax is a fixed cost to Comcast because it is a flat \$2.50, no matter how many subscriptions it sells. Because the tax has no impact on Comcast's MR or MC, the profit-maximizing level of output has not changed. So, Comcast will still sell 6 subscriptions per month at a price of \$14, but its profits will fall by the amount of the tax, from \$4 per month to \$1.50