

Market Structure: Problems

1. False. There must also be barriers to entry that prevent other firms from entering the market.
2. False. If a demander has market power (monoposony in the case of just one buyer), it restricts quantity in order to drive down the price.
3. False. In a perfectly competitive market prices equals both the marginal cost of production and the marginal utility of consumption.

Consider the market for Fruity Pebbles.

Table 1: Market for Fruity Pebbles

Units	Total Utility	Total Cost	MU	MC	Rev	MR
1	\$30	\$2	\$30	\$2	\$30	\$30
2	\$55	\$5	\$25	\$3	\$50	\$20
3	\$75	\$10	\$20	\$5	\$60	\$10
4	\$93	\$17	\$18	\$7	\$72	\$12
5	\$108	\$27	\$15	\$10	\$75	\$3
6	\$120	\$39	\$12	\$12	\$72	-\$3
7	\$130	\$49	\$10	\$10	\$70	-\$2
8	\$138	\$62	\$8	\$13	\$64	-\$6
9	\$143	\$77	\$5	\$15	\$45	-\$19
10	\$145	\$100	\$2	\$23	\$20	-\$25

4. Here, price can be either 6 or 7. I will go with 6 implying a price of \$12. Consumer surplus is the total utility less the total price paid. This equals $\$120 - \$72 = \$48$. Producer surplus is total revenue less total cost. This equals $\$72 - \$39 = \$33$. Total surplus is \$81
5. The monopolist will produce until marginal revenue equals marginal cost. here, that is 4 units at a price of \$18. Consumer surplus is now $\$93 - \$72 = \$21$, less than in #5. producer surplus is $\$72 - \$17 = \$55$, more than before. Total surplus is \$76, \$5 less than before. This is the deadweight loss.
6. One example would be to charge \$18 to the two consumers with marginal utilities equal to \$18 and \$20. It could then charge \$25 to the consumers with marginal utilities equal to \$30 and \$25. This would shift an additional \$14 from consumer to producer surplus ($\$7 \times 2$)

7. This goes beyond what we discussed in class. We need a new table. I will create a new column that multiplies marginal cost times quantity. This is the total price paid by the demander. Consider the market for Fruity Pebbles.

Table 2: Market for Fruity Pebbles

Units	Total Utility	Total Cost	MU	MC	MCxQ	Mar(QxMC)
1	\$30	\$2	\$30	\$2	\$2	\$2
2	\$55	\$5	\$25	\$3	\$6	\$4
3	\$75	\$10	\$20	\$5	\$15	\$9
4	\$93	\$17	\$18	\$7	\$28	\$13
5	\$108	\$27	\$15	\$10	\$50	\$22
6	\$120	\$39	\$12	\$12	\$72	\$22
7	\$130	\$49	\$10	\$10	\$70	-\$2
8	\$138	\$62	\$8	\$13	\$84	\$14
9	\$143	\$77	\$5	\$15	\$135	\$51
10	\$145	\$100	\$2	\$23	\$230	\$95

The monopsonist will buy until the final column (marginal total paid) equals marginal utility. Here, that is 4 units at a price of \$7. Consumer surplus is $\$93 - \$28 = \$65$. Producer surplus is $\$28 - \$17 = \$11$.

8. False. If antitrust actions successfully eliminate a monopoly or monopsonist, for example, they might restore a competitive equilibrium and reduce deadweight loss. One example would be an action that moves the economy from #5 to #4.

9. True. The key is that the market starts off by being competitive. A labor union then moves the economy up along the labor demand curve, raising wages and reducing employment. This creates deadweight loss.

10. False. here, we have dropped the assumption that the market starts off being competitive. If for example, firms have monopsony power, they might lower both wages and employment. A labor union might then reverse some of this effect by exerting market power on the supply side.

11. The benefit is that patents may provide a greater incentive to innovate, leading to more technological progress. The downside is they grant the holders market power which allows them to create deadweight loss.