1. a. In the textbook, *The Applied Theory of Price*, D.N. McCloskey refers to the equation $MR = MC$ as the rule of rational life. Who follows this rule: monopolies, competitive firms, or both?

Both follow this rule. For competitive firms, $MR = MC$. Of course, for competitive firms, price equals marginal revenue, so $P = MR = MC$: We usually emphasize $P = MC$ under competition.

With monopoly firms, this fact is much more blatant: $MR = MC$ is stated many times in this chapter.

b. Rapido, the shoe company, is so popular that it has monopoly power. It’s selling 20 million shoes per year, and it’s highly profitable. The marginal cost of making extra shoes is quite low, and it doesn’t change much if they produce more shoes. Rapido’s marketing experts tell the CEO of Rapido that if it decreased prices by 20 percent, it would sell so many more shoes that profits would rise. If the expert is correct, at its current output, then is $MC > MR$, is $MC = MR$, or is $MR > MC$?

If the expert is correct and a price decrease increases profits, $MR$ must be greater than $MC$ ($MR > MC$) at the current level of output.

c. If Rapido’s CEO follows the experts’ advice, what will this do to marginal revenue: Will it rise, fall, or be unchanged? Will Rapido’s total revenue rise, fall, or be unchanged?

Cutting the price means cutting marginal revenue as well: Just paired demand/$MR$ curves in this chapter. This will increase total revenue: Any time marginal revenue is positive, it means that a price cut will increase total revenue.

d. Apollo, another highly profitable shoe company, also has market power. It’s selling 15 million shoes per year, and it faces marginal costs quite similar to Rapido. Apollo’s marketing experts conclude that if they increased prices by 20 percent, profits would rise. For Apollo, is $MC > MR$, is $MC = MR$, or is $MR > MC$?

If a price increase raises profits, $MC > MR$ at the current level of output. The price is inefficiently low, and the firm is selling too many pairs of shoes to maximize profits.
2. **a.** What’s the rule: Monopolists charge a higher markup when demand is highly elastic or when it’s highly inelastic?

As we stated in the chapter, inelastic demand causes higher markups.

**b.** What’s the rule: Monopolists charge a higher markup when customers have many good substitutes or when they have few good substitutes?

Inelastic demand is the same as “fewer substitutes,” so fewer substitutes mean higher markups.

**c.** For the following pairs of goods, which producer is more likely to charge a bigger markup? Why?

i. Someone selling new trendy shoes, or someone selling ordinary tennis shoes?

ii. A movie theater selling popcorn or a New York City street vendor selling popcorn?

iii. A pharmaceutical company selling a new powerful antibiotic or a firm selling a new powerful cure for dandruff?

Trendy shoes, theater popcorn, and new, powerful antibiotic cures probably have higher markups.

People care about dandruff but a hat is a substitute for a good shampoo: And “you can't take it with you” is a force pushing people to have an inelastic demand for life-saving antibiotics.

3. When a sports team hires an expensive new player or builds a new stadium, you often hear claims that ticket prices have to rise to cover the new, higher cost. Let’s see what monopoly theory says about that. It’s safe to treat these new expenses as fixed costs: something that doesn’t change if the number of customers rises or falls. You have to pay A-Rod the same salary whether people show up or not, you have to make the interest payments on the new Yankee Stadium whether the seats are filled or not. Treat the local sports team as a monopoly in this question, and to keep it simple, let’s assume there is only one ticket price.

**a.** As long as the sports team is profitable, will a mere rise in fixed costs raise the equilibrium ticket price, lower the equilibrium ticket price, or have no effect whatsoever on the equilibrium ticket price? Why?

This has no effect on the marginal cost curve, so it will have no effect on the monopolist’s optimal price. It won't raise the price, it won't lower the price.

**b.** In fact, it seems common in real life for ticket prices to rise after a team raises its fixed costs by building a fancy new stadium or hiring a superstar player: In recent years, it’s happened in St. Louis and San Diego’s baseball stadiums. What’s probably shifting to make this happen? Name *both* curves, and state the direction of the shift.
It’s probably an increase in demand. People are willing to pay more to go to a nicer, newer stadium with better views; better TV screens; bigger, cleaner restrooms; more food choices. This rise in demand also causes a rise in the marginal revenue curve: Both shift to the right, raising the equilibrium ticket price.

c. So, do sports teams spend a lot of money on superstars so that they can pass along the costs to the fans? Why do they spend a lot on superstars, according to monopoly theory? (Note: Books like Moneyball and The Baseball Economist apply economic models to the national pastime, and it’s common for sports managers to have solid training in economic methods.)

They don’t spend a lot of money so they can pass the costs along. They spend the money in order to raise demand. Note that if they only raise demand by a little, they might lose money on the deal. The rise in demand has to be large enough to compensate for the higher average costs: a tough calculation to make.