Learning Targets:
1. Explain how a monopolist determines the profit-maximizing price
2. Determine whether a monopolist is earning a profit or a loss
3. Compare how long-run outcomes between a monopolist and perfectly competitive firms

Textbook Chapter: Chapter 14: Monopoly (pages 356-370)

1. WARM-UP: What happens to long-run equilibrium if there is a change in demand? What economic profit can we expect firms to have in the long-run?

2. **ASK:** What are the characteristics of a monopoly?
   a. Only 1 firm in the market
   b. Sells a unique product
   c. There are many barriers to entry

3. **ASK:** Can you think of examples where a monopoly might exist? College bookstore (prior to the Internet), Standard Oil, DeBeers diamonds, Major League Baseball

4. Class will look at how monopolies are different from perfectly competitive firms

5. **ASK:** What is the optimum output rule? MC=MR
   a. Profit maximizing output is determined where MC=MR
   b. It is the same for all firms

6. **ASK:** In a perfectly competitive market what does the demand curve look like?
   a. It is perfectly elastic
   b. Located at the price of the good
   c. Caused because firms are price takers who have no control over market price
   d. All goods are exactly the same so no one will purchase the firm's goods if it charges more than market price

7. A monopolist has a very different demand curve
   a. Monopolists are the only producer in the market
   b. Demand for their good is the downward-sloping market demand curve
   c. It also means that MR is not the same for every unit sold

8. **EXAMPLE:** Panhandle College bookstore is a monopoly for college clothing
   a. Price differs depending on the number of products demanded
   b. TR rises up until a point and then begins to diminish after the 5th unit
   c. Marginal revenue begins to decline after the first unit
   d. **ASK:** What do you notice about P and MR that is different for a monopolist than for a perfectly competitive firm? P=MR for perfect competition but in a monopoly P<MR

9. **ASK:** Why does TR rise at first and then fall? It is because of the price and quantity effects (think back to our unit on demand)
   a. Price effect – Increase in revenue due to a higher price
   b. Quantity effect – Loss of revenue due to a fewer goods being sold
10. **EXAMPLE:** Assume that the price of a good rises. We would then see both a price and quantity effect:
   a. When the quantity effect outweighs the price effect, TR increases
   b. When the price effect outweighs the quantity effect, TR decreases

11. With a downward-sloping demand curve there will **ALWAYS** be price effect from increasing output
   a. That means that MR will decrease with every unit sold
   b. So the MR curve always lies below the demand curve

12. When drawing the market for a monopolist we need to make sure to draw:
   a. Downward-sloping demand curve
   b. Downward-sloping MR curve that is less than demand

13. **ASK:** What is the optimum output rule again? MC=MR (this rule will appear over and over again on the AP test)
   a. This is still where a monopolist will produce
   b. The outcome is a little different, though

14. **EXAMPLE:** Assume that MC and ATC are constant (for ease of explanation right now)
   a. MC = $10
   b. MC curve will be horizontal at that price
   c. **ASK:** What is the profit maximizing output for the bookstore? 3 units
   d. How did you determine where the store maximizes its profits? Where MR=MC=$10 because of the optimum output rule
   e. **ASK:** What price do you think the monopolist will charge in this situation? $14 because that is what demanders are willing to pay at that level of output
      i. Once Q_m is determined then move VERTICALLY until you hit the Demand curve
      ii. This will determine the market price for the good
   f. **ASK:** What is the total profit for this firm then? π=(P-ATC)*Q → (14-10)*3 = $12

15. **ASK:** How is this output different from what you would expect in a perfectly competitive market in terms of price and quantity? P_c = $10; Q_c = 5 units
   a. P=MC in a perfectly competitive market
   b. Where P intersects the demand curve is where we would expect equilibrium

16. **ASK:** What do you notice about the market outcome for a monopolist versus a perfectly-competitive firm?
   a. Produces a smaller quantity: Q_m<Q_c
   b. Charges a higher price: P_m>Q_c
   c. Earns a profit (because of barriers to entry)

17. A more general view of monopoly shows ATC and MC curves, but the interpretation remains the same

18. You can also compare the monopolist outcome to that of perfect completion
   a. The efficient output is where you cannot make anyone better off without making someone worse off
   b. It also maximizes total surplus
   c. That point exists where P = MC (just like in perfect competition)
   d. The level of output at that point shows us that the output for a monopolist is less than efficient and the price is higher than the efficient price
   e. The area underneath the demand curve, above the MC curve, and to the right of the monopolist’s output is then defined as **DEADWEIGHT LOSS**

19. **PAIRS:** Work together to draw a correctly-labeled graph showing a monopolist operating at a loss in the short run.

20. **QUIZ:** Review quiz to assess learning