

## Problem Set # 2

- 1) Suppose that the inverse demand function for a monopoly's product is  $p = 100 - 2Q$ . 1) Draw the demand curve; b) Analytically find the marginal revenue curve and draw it.
- 2) Given the above demand curve, suppose that marginal cost is constant at 16; find the quantity that maximizes profit.
- 3) Suppose that the same market becomes perfectly competitive, find the market equilibrium.
- 4) Compute the consumer surplus in both market structures and determine the deadweight loss due to a monopoly

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1) If the inverse demand function for a monopoly's product is  $p = a - bQ$ , then the firm's marginal revenue function is

- A)  $a$ .
- B)  $a - (1/2)bQ$ .
- C)  $a - bQ$ .
- D)  $a - 2bQ$ .

2) If the inverse demand curve a monopoly faces is  $p = 100 - 2Q$ , and MC is constant at 16, then profit maximization

- A) is achieved when 21 units are produced.
- B) is achieved by setting price equal to 21.
- C) is achieved only by shutting down in the short run.
- D) cannot be determined solely from the information provided.

3) A profit-maximizing monopolist will never operate in the portion of the demand curve with price elasticity equal to

- A) -3.
- B) -1.
- C) -1/3.
- D) None of the above—the price elasticity does not matter.

4) A monopoly sets a price of \$50 per unit for an item that has a marginal cost of \$10. Assuming profit maximization, the implicit demand elasticity is

- A) -0.2.
- B) -0.8.
- C) -1.25.
- D) -5.0.

5) If a firm faces a flat demand curve

- A) it cannot engage in price discrimination.
- B) it can only engage in two-part tariffs.
- C) it can only engage in perfect price discrimination.
- D) None of the above.

6) A perfect price discriminating equilibrium maximizes

- A) consumer surplus.
- B) the associated deadweight loss.
- C) the market inefficiency.
- D) total welfare.

7) A firm practicing group price discrimination that has constant marginal cost will

- A) maximize total profit by maximizing profit for each group separately.
- B) will charge the same price to all groups.
- C) will act like a monopoly and treat all groups the same.
- D) sets  $p = MC$ .