

**Vocabulary/Definitions**

- Fixed costs
- Economy of scale
- Revenue
- Profit, as a function of revenue and cost
- Marginal cost and marginal revenue, as average rates of change
- Marginal cost and marginal revenue, as derivatives
- Why maximum profit occurs when  $MR = MC$

**Understand**

1. If the revenue of a business,  $R$  as a function of the quantity of items produced,  $q$ , is  $R(q) = 7.31q$ , what is the marginal revenue?
  
  
  
  
  
  
  
  
  
  
2. Suppose that the cost and revenue functions for a business are  $C(q) = 2.5q^3 + 2$  and  $R(q) = 15q$ . At what value of  $q$ , the quantity of items produced, is the profit maximized?