

Name \_\_\_\_\_

Date \_\_\_\_\_

**ECON 306 – INTERMEDIATE MICROECONOMICS  
ASSESSMENT QUIZ**

1. According to the law of diminishing marginal returns:
  - a. With a fixed input and successive additions of a variable input, at some point the rate of input growth of the fixed input begins to decline.
  - b. With successive units of a fixed input to a variable input, at some point the rate of output growth of the variable input begins to decline.
  - c. As you acquire successive units of the good, the next additional unit is less valuable than the previous unit acquired.
  - d. With a fixed input and successive additions of a variable input, at some point the rate of output growth of the variable input begins to decline.
  - e. With a fixed input and successive additions of a variable input, the rate of output growth of the variable input is always in decline.
  
2. Under the monopoly market model:
  - a. There are no dead weight costs
  - b. Consumer surplus is greater than monopoly profit
  - c. Prices are higher and quantity produced higher than under the perfectly competitive model
  - d. Prices are higher and quantity produced lower than under the perfectly competitive model
  - e. Price is equal to marginal revenue

*Use the following equation for Questions 3-5*

$$y = 5x^3 - 3x^2 + 9x$$

3. Find the first derivative.
  
  
  
  
  
  
  
  
  
  
4. Find the second derivative.
  
  
  
  
  
  
  
  
  
  
5. Solve for  $x$  when  $y=0$