

Chapter 3 Free-Response Review Exercises

Directions: These review exercises are free-response questions based on the content in Chapter 3: Applications of Differentiation.

- 3.1: Minimum and Maximum Values
- 3.2: Mean Value Theorem and Rolle's Theorem
- 3.3: Using the First and Second Derivatives
- 3.4: Particle Motion
- 3.5: Indeterminate Forms and L'Hopital's Rule
- 3.6: Optimization
- 3.7: Applications of Differentiation in Economics
- 3.8: Newton's Method

For each question, show all your work. To make the best use of these review exercises, follow these guidelines:

- Print out this document and work through the questions as if this paper were an exam.
- Do not use a calculator of any kind. All of these problems are designed to contain simple numbers.
- Adhere to the time limit.
- After you complete all the questions, score yourself according to the Solutions document. Note any topics that require revision.

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Applications of Differentiation

Number of Questions—0

Time—1 hour 30 minutes

NO CALCULATOR

This marks the end of the review exercises.