Chapters 1 to 3 Review

Student Text Pages
214 to 217

Suggested Timing
60–75 min

Tools
- grid paper
- graphing calculator

Related Resources
- G–1 Grid Paper

Using the Chapters 1 to 3 Review

Each question reviews different skills and concepts. Students might work independently to complete the Chapters 1 to 3 Review, then in pairs to compare solutions. Alternatively, the Chapters 1 to 3 Review could be assigned for reinforcing skills and concepts in preparation for a specific chapter Practice Test.

This is an opportunity for students to assess themselves by completing selected questions and checking their answers against the answers in the back of the student textbook. They can then revisit any questions with which they had difficulty.

Task

Student Text Pages
218

Suggested Timing
75 min

Tools
- grid paper
- graphing calculator
- computer with graphing software (optional)
- computer with Internet access (optional)

Related Resources
- G–1 Grid Paper
- BLM 3–12 Task: Radioactive Isotopes Rubric

Ongoing Assessment

Use **BLM 3–12 Task: Radioactive Isotopes Rubric** to assess student achievement.

Radioactive Isotopes

Teaching Suggestions

- Students should review the concepts of radioactive decay and half-life that were introduced in Section 3.2.
- Spreadsheets and graphing technology are especially useful for the comparison between half-life and effective half-life in part b).
- Access to the library and/or Internet is recommended for part c).

Hints for Evaluating a Response

Student responses are being assessed for the level of mathematical understanding they represent. As you assess each response, consider the following questions:

- Can the student use the given information to develop an equation to model this radioactive decay?
- Does the student use an algebraic model to answer questions related to the amount of radioactive material remaining at the given times?
- Can the student produce a graphical model for the situation?
- Is the student able to determine effective half-lives based on the given information?
- Does the student make competent comparisons between half-lives and effective half-lives numerically, graphically, and algebraically?
- Does the student demonstrate proper use of mathematical conventions and forms?
- Has the student applied effective research strategies to discover additional information concerning radioactive isotopes and related issues?
- Has the student presented his or her findings in a clearly written, error-free report, with sources of information properly cited?