Chapter 5 Review

Student Text Pages
268–269

Suggested Timing
80 min

Materials and Technology Tools
- graphing calculators
- grid paper

Related Resources
- BLM G–1 Grid Paper
- BLM 5–12 Chapter 5 Review

Accommodations

Perceptual–encourage students to sketch diagrams for **questions 3 and 4**

Motor–give students extra time to complete the Chapter 5 Review questions

Language–allow students to work in pairs to provide support in reading the questions

Memory–provide a chart with the vocabulary and space to write a definition of each term and draw a sketch if appropriate

Ongoing Assessment

- Upon completing the Chapter 5 Review, students can also answer questions such as the following:
  - What questions did you find easy? Difficult? Why?
  - How often did you have to check the related worked example in the textbook to help you with the questions? For which questions?

Using the Chapter Review

- This Chapter Review is organized by sections and is designed to review different skills and concepts in this chapter.
- Have copies of **BLM G–1 Grid Paper** available for **questions 2 and 6**.
- Students might work independently to complete the Review, then in pairs to compare solutions.
- Alternatively, the Review could be assigned for reinforcing skills and concepts in preparation for the Practice Test.
- After students have completed this Chapter Review, encourage them to make a list of questions that caused them difficulty, and include the related sections and teaching examples. They can use this to focus their studying for a final test on the chapter's content.
- Use **BLM 5–12 Chapter 5 Review** for extra review.

Chapter 5 Problem Wrap-Up

Student Text Page
269

Suggested Timing
40 min

Materials and Technology Tools
- graphing calculators

Related Resources
- BLM 5–13 Chapter 5 Problem Wrap-Up Rubric

Accommodations

Motor–encourage students to work with a partner when using the graphing calculator

Language–allow students to explain answers orally

Summative Assessment

- Use **BLM 5–13 Chapter 5 Problem Wrap-Up Rubric** to assess student achievement.

Using the Chapter Problem

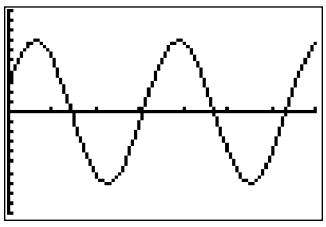
- Review the introduction to the chapter problem on page 231. Discuss how many examples of trigonometric functions are used in the health industry.
- You may wish to use one of two approaches for assigning the exercise questions related to the Chapter Problem: have students answer the questions ongoing and refer to them during the Wrap-Up or answer all the questions at the end of the chapter and include them in the summative assessment.
- Give students time to work on the problem using a graphing calculator. Students should work alone.
- Stress that their communication skills are important when answering the questions in the Wrap-Up, especially in parts c) to e).

Level 3 Notes

- Student demonstrates understanding of the sine function and the meaning of transformations of the basic sine function in terms of the context, the equation, and the shape of the graph.
- Student demonstrates understanding of problem solving techniques.
- Student uses mathematical language effectively.
- Student's solution is clearly organized and choices are justified.
- Student makes minor errors in calculations and graphing.

Level 3 Sample Response

a)



b) The maximum radiation is 5 nW. The minimum radiation is −5 nW.

c) The period is 0.000 31 s. Approximately 3225 cycles occur per second.

d) The graph of $I(t) = 5 \sin (1\ 100\ 000t + 23)$ is the graph of $I(t) = \sin t$ after a vertical stretch of factor 5, a horizontal compression of factor $\frac{1}{1\ 100\ 000}$, and a horizontal translation of 23 units to the left.

e) The maximum radiation is changed from 5 nW to 8 nW and the period is now 0.000 22 s. The graph of $I(t) = 8 \sin (1\ 50\ 000t + 23)$ is the graph of $I(t) = \sin t$ after a vertical stretch of factor 8, a horizontal compression of factor $\frac{1}{1\ 500\ 000}$, and a horizontal translation of 23 units to the left.

What Distinguishes Level 2

- Student demonstrates some understanding of the sine function and the meaning of transformations of the basic sine function in terms of the context, the equation, and the shape of the graph.
- Student demonstrates some understanding of problem solving techniques.
- Student uses mathematical language somewhat effectively.
- Student's solution is somewhat organized and choices are partially or ineffectively justified.
- Student makes some significant errors in calculations and graphing.

What Distinguishes Level 4

- Student demonstrates thorough understanding of the sine function and the meaning of transformations of the basic sine function in terms of the context, the equation, and the shape of the graph.
- Student demonstrates thorough understanding of problem solving techniques.
- Student uses mathematical language very effectively.
- Student's solution is highly organized and choices are clearly justified.
- Student makes very few or no errors in calculations and graphing.