Chapter 6 Problem Wrap-Up

Student Text Page
349

Suggested Timing
80 min

Tools
- square dot paper
- isometric dot paper

Related Resources
BLM 6-19 Chapter 6 Problem Wrap-Up Rubric
BLM G-4 Square Dot Paper
BLM G-5 Isometric Dot Paper

Teaching Suggestions

- Distribute copies of **BLM G-4 Square Dot Paper** and **BLM G-5 Isometric Dot Paper**.
- Remind students to keep track of their solutions to the chapter problem questions. Discuss how the chapter problem questions relate to the chapter problem scenario.
- The chapter problem requires students to work through a design project. The project need not be elaborate, but it must include the elements listed in the Chapter Problem Wrap-Up on page 349.
- Students should know early in the chapter that there will be a practical project assigned at the end of the chapter.
- If you choose to use the Chapter Problem as a summative assessment, you should introduce it several days ahead. Students will need some time to choose their design project.
- If you choose to revisit the Chapter Problem as you work through each section in the chapter, you might still wish to briefly visit the Wrap-Up early in the chapter, and refer to it as the chapter progresses.
- Another strategy is to ask students to submit a brief description of the project being contemplated before beginning to work on the project itself. This gives you a chance to check that projects will be neither too simple nor too complex.

Level 3 Sample Response

Answers may vary.

Level 3 Notes

Look for the following:

- appropriate plan with four or more geometric elements, a description of the constraints, and a plan to meet the constraints
- clear and accurate isometric perspective drawing or orthographic drawings with few minor errors
- appropriate calculations with few minor errors
- clear and accurate pattern or net and scale model with few minor errors
- understanding of two-dimensional representations of three-dimensional objects
- understanding of problem-solving techniques
- organised summary and clear justification for responses
- effective use of geometric terms

What Distinguishes Level 2

Look for the following:

- somewhat appropriate plan with four or fewer geometric elements, a partial description of the constraints, and a partial plan to meet the constraints
- somewhat clear and accurate isometric perspective drawing or orthographic drawings with some significant errors
- appropriate calculations with some significant errors
- somewhat clear and accurate pattern or net and scale model with few minor errors
- some understanding of two-dimensional representations of three-dimensional objects

- some understanding of problem-solving techniques
- somewhat organised summary and clear justification for responses
- somewhat effective use of geometric terms

What Distinguishes Level 4

Look for the following:

- appropriate and detailed plan with more than four geometric elements, a clear and complete description of the constraints, and a comprehensive plan to meet the constraints
- very clear and accurate isometric perspective drawing or orthographic drawings
- appropriate and detailed calculations
- very clear and accurate pattern or net and scale model
- thorough understanding of two-dimensional representations of three-dimensional objects
- thorough understanding of problem-solving techniques
- highly organised summary and clear justification for responses
- highly effective use of geometric terms

Summative Assessment

- Use **BLM 6-19 Chapter 6 Problem Wrap-Up Rubric** to assess student achievement.