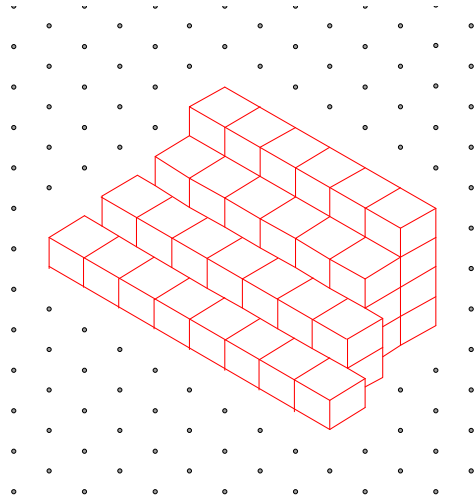


Chapter 6 TASK: Business is Booming

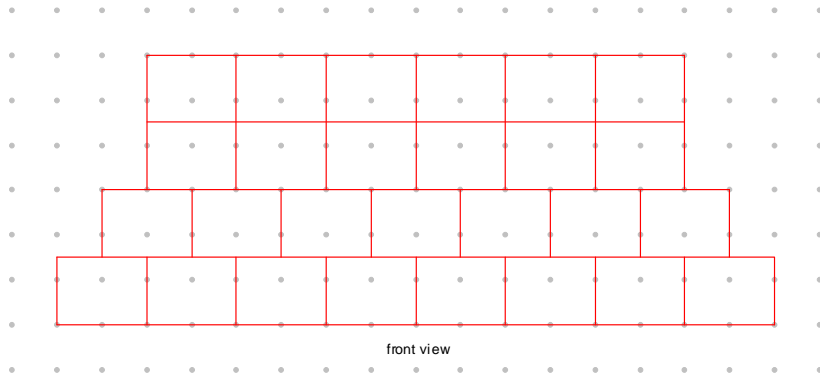
Level 4 Sample Response

1. Isometric perspective drawing of the stairs that will connect the restaurant with the addition, created using *The Geometer's Sketchpad*[®].

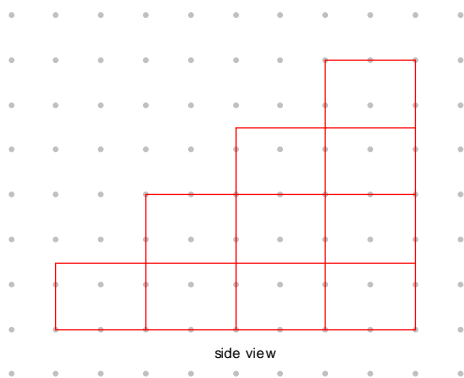


2. Set of orthographic drawings of the stairs that will connect the restaurant with the addition, created using *The Geometer's Sketchpad*[®].
Scale: distance between each point on the square dot paper grid represents 3 in.

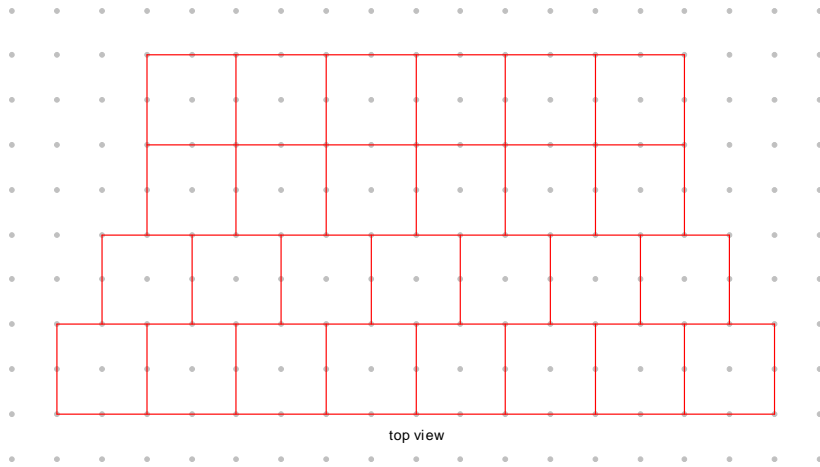
front view of the stairs



side view of the stairs



top view of the stairs



3. Scale model of the stairs that will connect the restaurant with the addition, created using interlocking cubes. Let the side of each cube represent 3 inches.



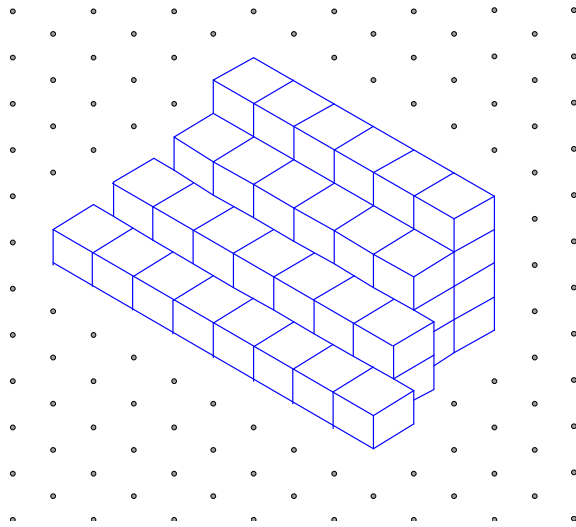
Level 4 Notes

Look for the following:

- a design of the stairs using drawing software, or pencil and isometric paper is included in the solution
- use of technology, such as *The Geometer's Sketchpad*[®] to create the orthographic drawings for the set of stairs
- a clearly-labelled accurate set of orthographic drawings of the stairs showing the front view, the side view and the top view
- the orthographic drawings are drawn to scale and the scale is stated as a part of the solution
- the line segments in the orthographic drawings are shown in red
- very few or no errors in the solutions
- a thorough understanding of the problem and how it relates to perspective and orthographic drawings
- a scale model of the stairs is included with the solution and has been created using a material such as cardboard, foam board, or interlocking cubes
- the length of the sides of each cube is designated in the solution

Level 3 Sample Response

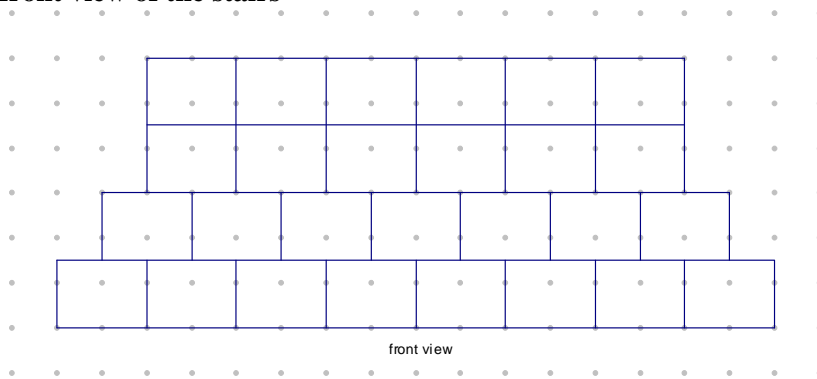
1. Isometric perspective drawing of the stairs that will connect the restaurant with the addition.



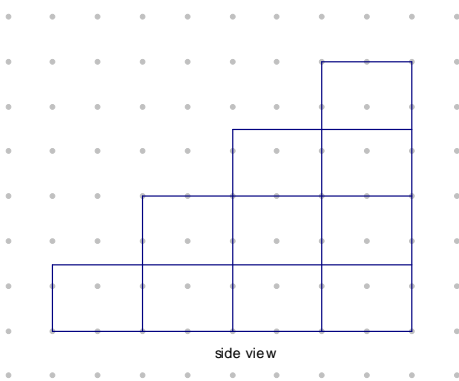
2. Set of orthographic drawings of the stairs that will connect the restaurant with the addition.

The distance between each point on the square dot paper grid represents 3 inches.

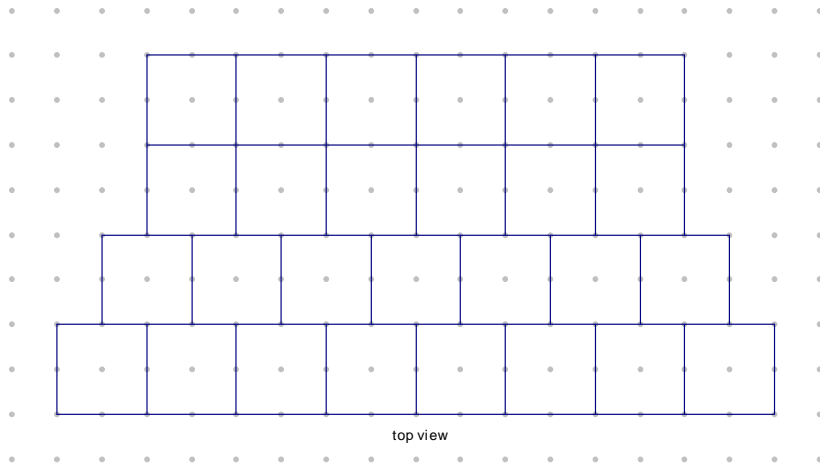
front view of the stairs



side view of the stairs



top view of the stairs



3. Scale model of the stairs that will connect the restaurant with the addition, created using interlocking cubes. Let the side of each cube measure 3 inches.



Level 3 Notes

A level 3 response to the three questions will be very similar to the level 4 response with the following exceptions.

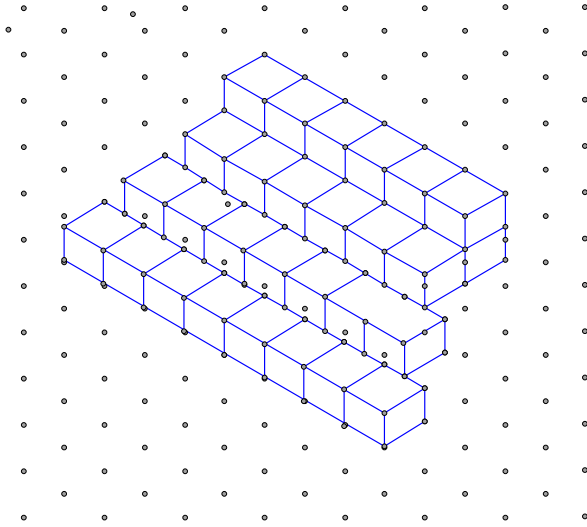
For **question 1**, the the scale diagram of the stairs may not be drawn accurately

For **question 2**, the drawings may have small errors due to using scale incorrectly.

For **question 3**, the scale model of the stairs may not be an accurate representation of the stairs.

Level 2 Sample Response

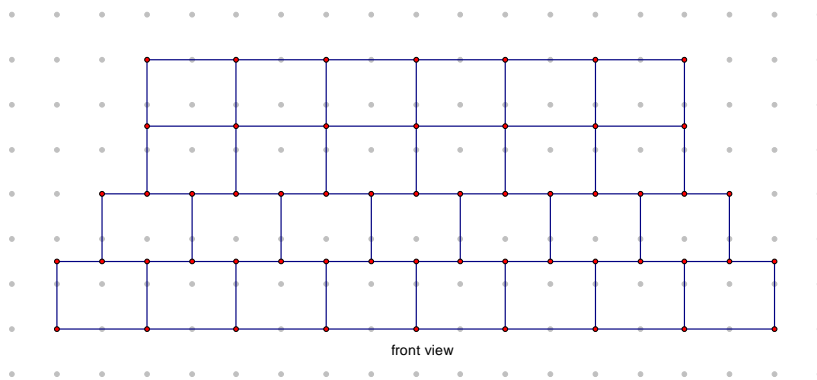
1. Isometric perspective drawing of the stairs.



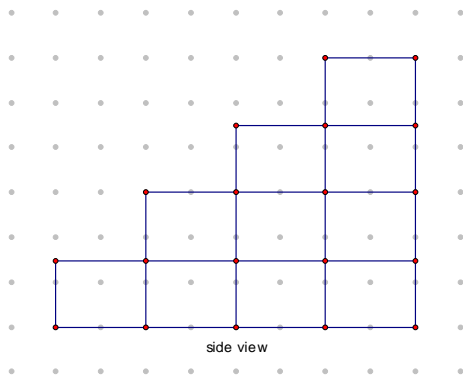
2. Set of orthographic drawings of the stairs.

The distance between points on the square dot paper grid represents 3 inches.

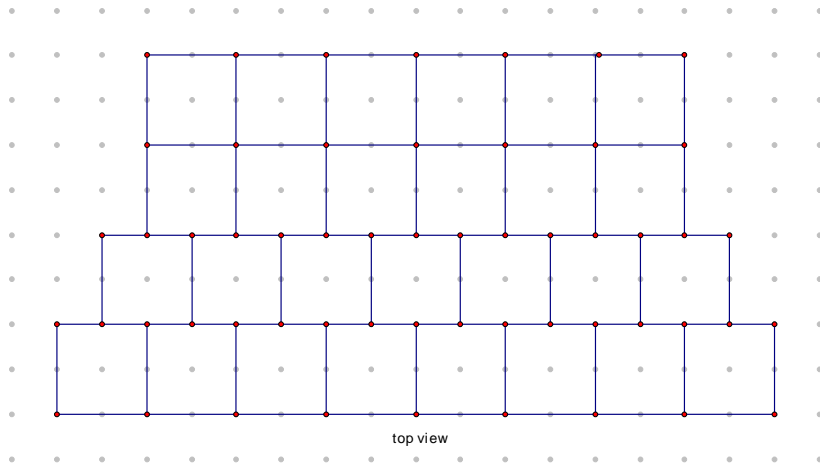
front view of the stairs



side view of the stairs



top view of the stairs



3. Scale model of the stairs that will connect the restaurant with the addition, created using interlocking cubes.



Level 2 Notes

Look for the following:

- some justification and correctness in the student responses; however, the structure that is apparent in the level 3 and level 4 solutions will be missing
 - for **question 2**, the orthographic drawings of the stairs may include the red points and/or may not be drawn accurately
 - for **question 3**, the scale model of the stairs may not be an accurate representation of the stairs, or the scale model may be only partially completed
-

Level 1 Notes

Look for the following:

- little or no effort to create a design for the set of stairs, a set of orthographic drawings of the stairs and a scale model of the stairs
- for **question 2**, there may be an attempt to draw the set of orthographic drawings using pencil and paper, but there will be inaccuracies in the scale and/or set of orthographic drawings
- for **question 3**, the scale model of the set of stairs may not be an accurate representation of the set of stairs, or may be missing from the solution