

## Exercise 22-2

1. Start AutoCAD if it is not already started.
2. Start a new drawing from scratch or use a decimal-unit template of your choice. Save the drawing as EX22-2.
3. Set up the appropriate layers, including a layer for dimensions.
4. Set the drawing units length precision to 0.00.
5. Turn on the **Infer Constraints** tool.
6. Use the **LINE** command, the default horizontal and vertical polar tracking angles, and direct distance entry to construct a 4-unit by 2-unit rectangle. Make the first 4-unit side horizontal. Exit the **LINE** command only after you draw all four segments. Four coincident constraints create the corners, a horizontal constraint makes one side horizontal, and three perpendicular constraints make the sides perpendicular.
7. Use grip editing to experiment with stretching the endpoints of the lines. Notice that the geometric constraints make the lines perform like an actual rectangle, instead of a group of line segments.
8. Turn off the **Infer Constraints** tool.
9. Use the **LINE** command, the default horizontal and vertical polar tracking angles, and direct distance entry to construct another 4-unit by 2-unit rectangle. Make the first 4-unit side horizontal. Exit the **LINE** command only after you draw all four segments.
10. Use grip editing to experiment with stretching the endpoints of the lines you created in the previous step. You should notice a significant difference between editing this rectangle and the inferred constraints rectangle.
11. Turn on the **Infer Constraints** tool and draw a vertically constrained 2.5-unit line.
12. Draw a  $\varnothing 1.5$ -unit circle away from existing objects. Use the **MOVE** command and **Center** and **Midpoint** object snap modes to move the center of the circle to the midpoint of the 2.5-unit line.

13. Use the **MOVE** command to move the line. Notice that the coincident constraint causes the circle to move with the line.
14. Resave and close the file.
15. Keep AutoCAD open for the next exercise, or exit AutoCAD if necessary.