

3D AutoCAD 2010: One Step at a Time
Lesson 8: Solid Modeling Creation Tools - Basic

10R8-3D

Review Questions

Answer these questions on a separate sheet of paper.

The (1), (2), and (3) commands create 3D Solids from 2-dimensional regions and solids.

- 1.
- 2.
- 3.
4. _____ are solid shapes – predefined and user-defined – with which you build your model.
5. Control the number of lines used to draw a rounded solid object with the _____ system variable.
6. One way to draw a solid pyramid is to use the _____ option of the Extrude command.
7. (T or F) It is necessary to redraw an object to view changes in the Isolines display.
8. (T or F) It may be necessary to regenerate an object to view changes in the Isolines display.
9. (T or F) The Cube option of the Box command prompts only for the length of the box.
10. The Center option of the Box command identifies the center of the box along (the X- and Y-Axes, the X-, Y- and Z-Axes).
11. Which prompt of the Wedge command identifies the location of the right angle?
12. Orient the solid wedge using the Rotate (command, option).
13. Use the _____ command to draw a solid cylinder.
14. (T or F) You can draw an elliptical cone using the Cone command.
15. (T or F) There is no command to create a solid Dome or Dish.
16. The Surface Modeling command that most closely resembles the solid Revolve command is _____.
17. When using the Object option to define the axis of revolution of the Revolve command, the object selected (must, does not have to) exist in the current X-Y plane.
18. The shape selected during the Revolve command must be (open, closed) to create a solid object.
19. (T or F) Unlike the Revsurf command, the Revolve command does not allow the user to control the angle of revolution.
20. (T or F) In Solid Modeling, the building blocks are not only the box, wedge, cone, cylinder, sphere, and torus but any three dimensional object created by extrusion as well.
21. To control the smoothness or shape of a solid primitive, you should set which system variable:
 - a) Surftab1

- b) Surftab2
 - c) Isolines.
22. To extrude, you can
- a) pick the Extrude button on the Modeling panel
 - b) type Extrude or ext at the command prompt
 - c) access the Extrude command from the Draw pull down menu
 - d) all of the above.
23. (T or F) The Path of extrusion does not determine height.
24. (T or F) If a figure has already been drawn but the shape does not look right, the user can reset the isolines system variable to give a more accurate and pleasing view of the object.
25. (T or F) When creating a solid object with the Revolve command, the object to be revolved must be closed.
26. (T or F) Revolve, like Revsurf, creates objects regardless of the UCS location.
27. (T or F) When using the Revolve command, there is never a need to use OSNAPs when selecting the starting point.
28. Which command would you use to turn a 3dface into a solid object – Thicken or Extrude.
29. To dynamically add thickness to a 2d object, use the _____ command.
30. A quick tool you can use to turn 2-dimensional walls of a floor plan into 3-dimensional walls is _____.
31. The Pyramid command most closely resembles which 2D command?
32. (T or F) AutoCAD creates all helices counterclockwise; you must mirror them to get clockwise helices.
33. Use the _____ command to revolve an object along a helix.
34. To clean a drawing of all extraneous 3-dimensional objects, use the
- a) Sweep command
 - b) Clean command
 - c) We don't have a command for this.
35. (T or F) Use the ConvToSolid command to convert a circle with thickness to a solid.
36. (T or F) Sweep clears a solid of extraneous lines.
37. Use the _____ command to turn a helix line into a shaped spiral.

Answers:

- | | |
|-----------------------------------|---------------|
| 1. Extrude | 20. T |
| 2. PressPull | 21. c |
| 3. Thicken | 22. d |
| 4. Solid Modeling Building Blocks | 23. F |
| 5. Isolines | 24. T |
| 6. Taper angle | 25. T |
| 7. F | 26. F |
| 8. T | 27. F |
| 9. T | 28. Extrude |
| 10. the X-, Y- and Z-Axes | 29. Presspull |
| 11. Specify first corner | 30. Polysolid |
| 12. Command | 31. Polygon |
| 13. Cylinder | 32. F |
| 14. T | 33. Sweep |
| 15. T | 34. c |
| 16. Revsurf | 35. T |
| 17. Must | 36. F |
| 18. Closed | 37. Sweep |
| 19. F | |