

**AutoCAD 2009: One Step at a Time**  
**Lesson 4: Predefined Surfaces**

**09R4-3D**

**Review Questions**

Answer these questions on a separate sheet of paper.

List the eight predefined Surface Models.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. Surface Models are created as \_\_\_\_\_.
10. When exploded, a Surface Model becomes a series of \_\_\_\_\_.

Use the (11) option of the (12) command to draw any six-sided box whose sides, top, and bottom are parallel or perpendicular to the current UCS.

11. \_\_\_\_\_
12. \_\_\_\_\_
13. A \_\_\_\_\_ is a box whose sides, top, and bottom are all equal.
14. When drawing a wedge, you can change the \_\_\_\_\_ to help control the direction of the slope.

List the four types of surface pyramid you can draw in AutoCAD.

15. \_\_\_\_\_
16. \_\_\_\_\_
17. \_\_\_\_\_
18. \_\_\_\_\_
19. A \_\_\_\_\_ is a pyramid with only four triangles.
20. All pyramids are \_\_\_\_\_.
21. The top of a pointed pyramid is called the \_\_\_\_\_.
22. An AutoCAD pyramid with top points and a rectangular base is called a \_\_\_\_\_-top pyramid.
23. (T or F) It is possible to draw a pyramid with a larger top than base.
24. (T or F) A cone's top must be smaller than its base.
25. (T or F) To point a cone downward, simply make the height a negative number.
26. A \_\_\_\_\_ is the upper half of a sphere.
27. A \_\_\_\_\_ is the lower half of a sphere.
28. A \_\_\_\_\_ looks like the inner tube of a truck tire.
29. (T or F) You can use the fillet command to soften the edges of a surface box.

30. (T or F) You can create concentric spheres with the offset command.
31. (T or F) You can create multiple copies of a pyramid with the array command.
32. (T or F) You can remove part of a sphere by exploding it and erasing the 3DFaces.
33. (T or F) Predefined Surface Models may be accessed through the 3D command.
34. (T or F) Predefined Surface Models are solid models.
35. (T or F) There are ten geometric objects accessible through the 3D command: barrel, box, cone, dish, dome, mesh, pyramid, sphere, torus, and wedge.
36. (T or F) The creation of 3D Surface Domes, Dishes, and Spheres requires not only a radius, but the number of longitudinal and latitudinal segments for the surface of the 3D object.
37. (T or F) An exploded 3D face cannot be easily modified, trimmed, extended, filleted, chamfered, broken, lengthened, or (worst of all) offset.
38. (T or F) 3D Faces like 3D Meshes have wall thickness.
39. (T or F) OSNAPs will work on surface Models.
40. (T or F) Surface Models can't be mated together to form one object.

Answers:

- |              |                 |       |
|--------------|-----------------|-------|
| 1. Box       | 15. Four-sided  | 29. F |
| 2. Wedge     | 16. Ridge       | 30. F |
| 3. Pyramid   | 17. Tetrahedron | 31. T |
| 4. Cone      | 18. Top         | 32. T |
| 5. Sphere    | 19. Tetrahedron | 33. T |
| 6. Dome      | 20. Polyhedrons | 34. F |
| 7. Dish      | 21. Apex        | 35. F |
| 8. Torus     | 22. Ridge       | 36. T |
| 9. 3D meshes | 23. T           | 37. T |
| 10. 3D faces | 24. F           | 38. F |
| 11. Box      | 25. F           | 39. T |
| 12. 3D       | 26. Dome        | 40. T |
| 13. Cube     | 27. Dish        |       |
| 14. UCS      | 28. Torus       |       |