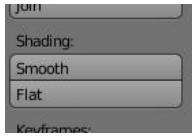
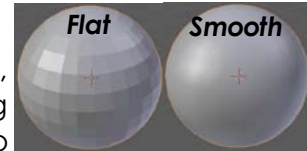


Chapter 3- Creating and Editing Objects

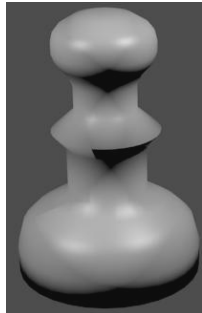
Using the Shading Smooth-Flat Options and Auto Smooth:



As you add objects and view them in Flat shading, you will notice that circular objects are not being displayed smooth. In the *Tool Shelf*, you will see two



buttons under Shading labeled **Smooth** and **Flat**. These 2 buttons not only effect the way things look on the screen, but how they will be rendered in a final image. **Be aware that the appearance of objects on the screen are not displayed at the same quality as a final rendered image.** Auto Smooth (found in the *Object Data*

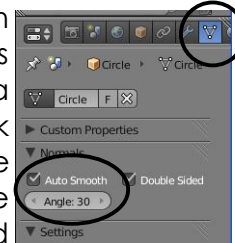


Smooth Only



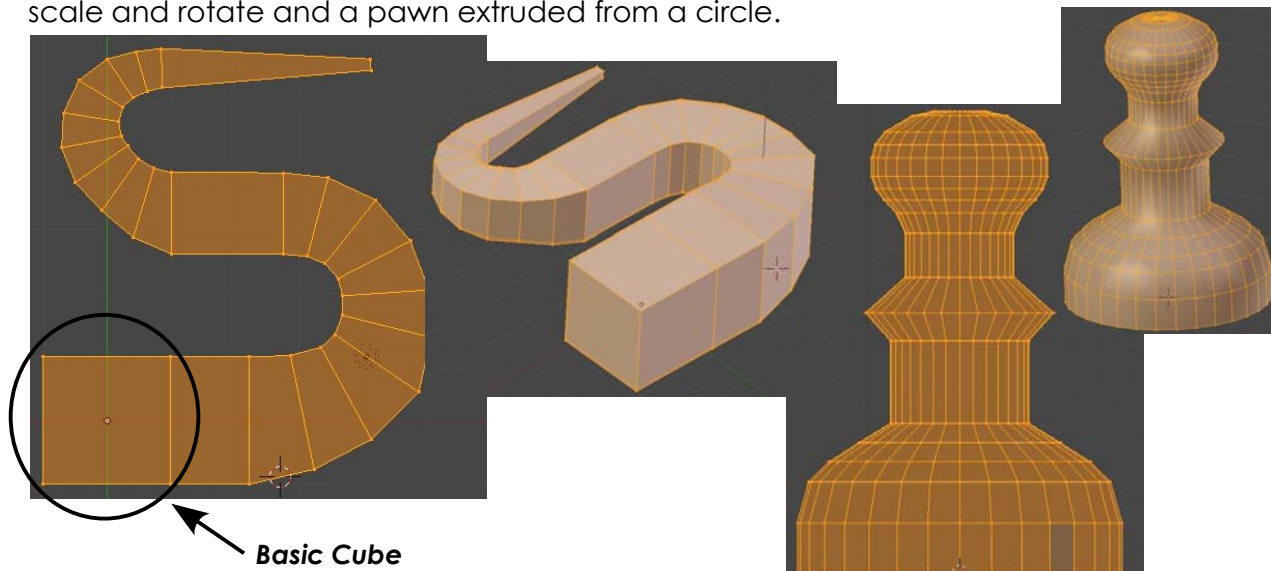
Auto Smooth

buttons) is used to smooth objects when faces meet at a certain degree or less while larger angles are kept sharp. This is a great feature when *Smooth* does not work properly alone. To use *Auto Smooth*, hit the *Auto Smooth* button. Adjust the degree angles as needed. To see a rendered picture of what the camera views, press **F12**. *Smooth* and *Auto-Smooth* are great for flat objects as well and help rendering.



Extruding Shapes:

Shapes can be lengthened by selecting a group of verticies, then by pressing the "**E**" key (or by selecting it in the *Tool Shelf*). You will make a duplicate of those verticies. They can then be "G" (moved), "S" (scaled), and "R" (rotated). When extruding a face, it will extrude in a locked direction, perpendicular to the face. When extruding connected verticies only, the extrusion will be free-moving. If you use the "*Extrude Individual*" command in the *Tool Shelf*, it will extrude only the verticies and no faces (it won't be visible in 3D). Feel free to experiment with them. Below are example of a cube, extruded from the right side (only right 4 verticies were selected) several times using scale and rotate and a pawn extruded from a circle.



Basic Cube