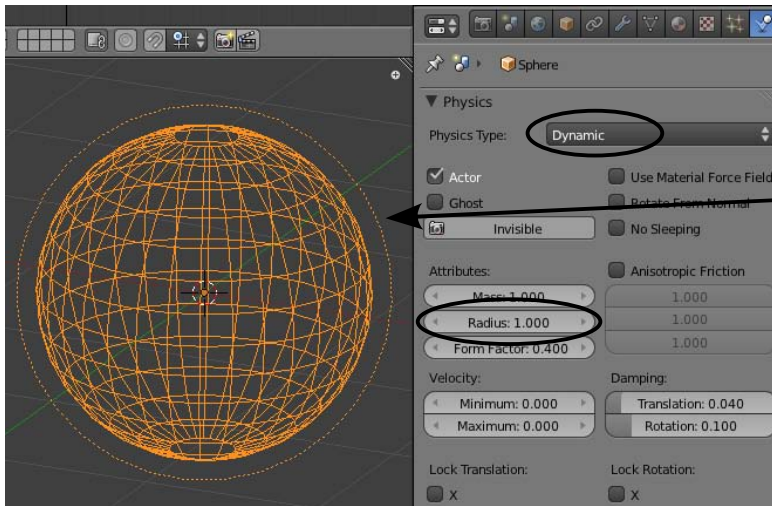


Chapter 21- Game Engine Basics

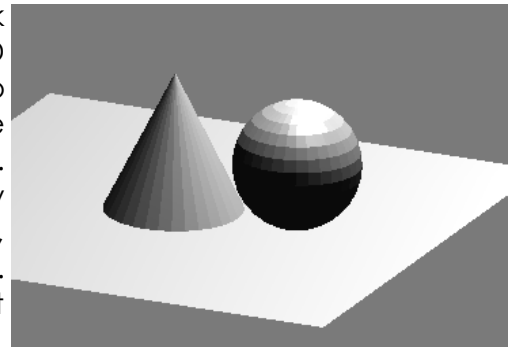


Change the *Physics Type* to "Dynamic". If you are in wireframe mode and scaled the sphere down in size, you will see a dashed circle around it. This circle represents the actual size of the actor. You will need to change the "Radius" setting to match the size of the sphere. If this circle is larger than the sphere, when you play the physics, the ball will hover over the plan and never touch it.



RoboDude Says: The game engine likes actors (radius) to be a size of one whenever possible. If you scale it down and also scale the radius circle to match, it may still not work correctly. Pressing "**Ctrl-A**" and applying a reset the Scale and Rotation can usually correct this problem.

It's now time to test out the system. Switch back *Solid* display mode. With your cursor in the 3D viewport window, press "**P**" to put Blender into game play mode. The ball should fall and hit the cone, but it probably won't act like right. Depending on where you placed the cone, it may even balance on the top of it! If that happens, move the cone slightly to one side and try again. The ball hits the cone, then slides down. It doesn't rotate like a real ball. To exit game play, hit "Esc".



Dynamic and Rigid Body Actors:

A *Dynamic* actor allows you to use physics on it and can fall, bounce and be pushed by forces, but not act like a true solid (*rigid*) body. These actors are great for games where you need to drive or run around in a maze or other scene. A *Rigid Body* actor will like a real solid body. It will spin and deflect when it collides with other objects. Good for some things in the game engine, but better for creating animations like a brick wall collapsing and things bouncing around.

Now change the sphere into a "Rigid Body" actor and hit "**P**" to test out the systejm again. The ball should now roll off the plane and fall into nothingness. Press "Esc" to exit. Feel free to experiment with some of the other setting like Mass. Just like real life, if 2 objects collide with different masses, one will feel the effect more than the other.

