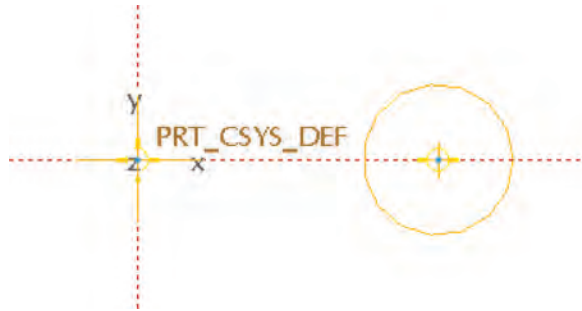


ROTATIONAL BLENDS

Rotational blends give you the ability to rotate a cross section about the Y-axis.

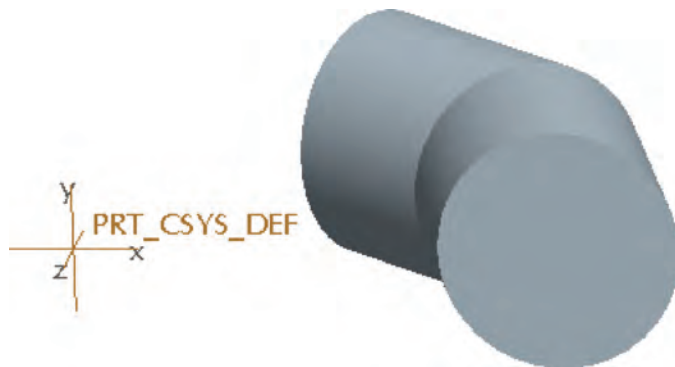
When creating the rotational blend sections, realize that there is no depth between each section. There is merely the sketch, each with its own coordinate system, and an angle of rotation between the sketches. The coordinate systems of each sketch are lined up, and the sketches are then rotated about the Y-axis to give the feature depth.

After selecting the sketching plane and orientation, sketch your cross section. Then go to SKETCH > COORDINATE SYSTEM to insert a coordinate system. In this example, we have lined up the sketch coordinate system with the coordinate system of the part in order to rotate around the Y-axis of the part.



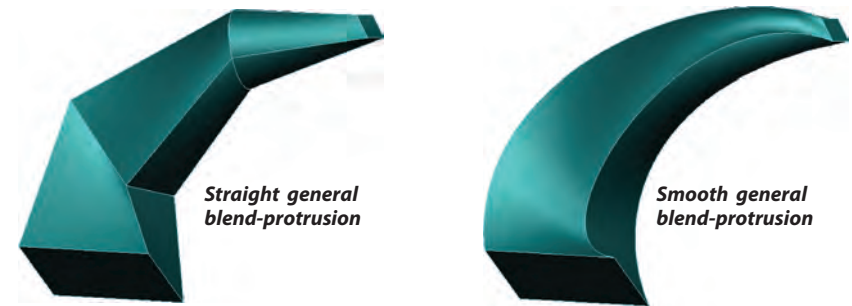
Select the check mark to finish the sketch and then enter an angle of rotation to the next sketch. Again, create a sketch and coordinate system.

Here, we have created three identical circular sketches and rotated them about the Y-axis of the part.



GENERAL BLENDS

The **General Blend** gives you even more freedom with the ability to rotate a sketch about any axis of a coordinate system – X, Y or Z. The image below shows three sketches in a general blend. In all sketches, the blend is translated in the Z-axis direction.



OTHER BLEND OPTIONS

One of the basic rules of a blend is that all of the sections must have the same number of entities. There are two exceptions to this rule.

Exception 1: The first or last section of the blend can be a sketched point. If you create the first or last section as a point, all entities from the adjoining section will be blended to the point and you will get an additional option of “sharp” or “smooth” which determines how the adjoining section is going to blend into the point.

Exception 2: A sketch can also contain fewer points than a previous section by using the **Blend Vertex** option. To place a blend vertex, hold down the right mouse button, select “Blend Vertex”, and then select the sketch vertex to locate it on. Pro/ENGINEER understands that an entire surface from an adjoining section will be blended into a blend vertex.

In the example below, the first square sketch contains four entities, and the second sketch contains three. The top surface of the square will blend into the selected vertex.

