# SOLIDWIZE

ONLINE SOLIDWORKS TRAINING

Simple Revolve: Pawn Chess Piece

Step 1: Creating the Profile

Using **Inch** as the unit, start by creating a construction line through the origin as shown below. Create a circle using the circle tool highlighted below. Make the edge of the circle coincident to the top end point of the construction line and the center of the circle coincident to the line itself.
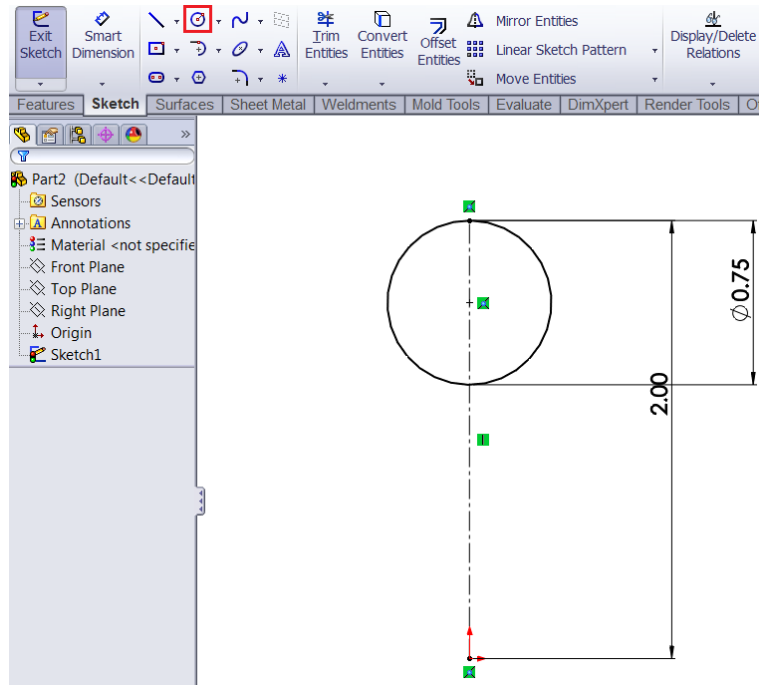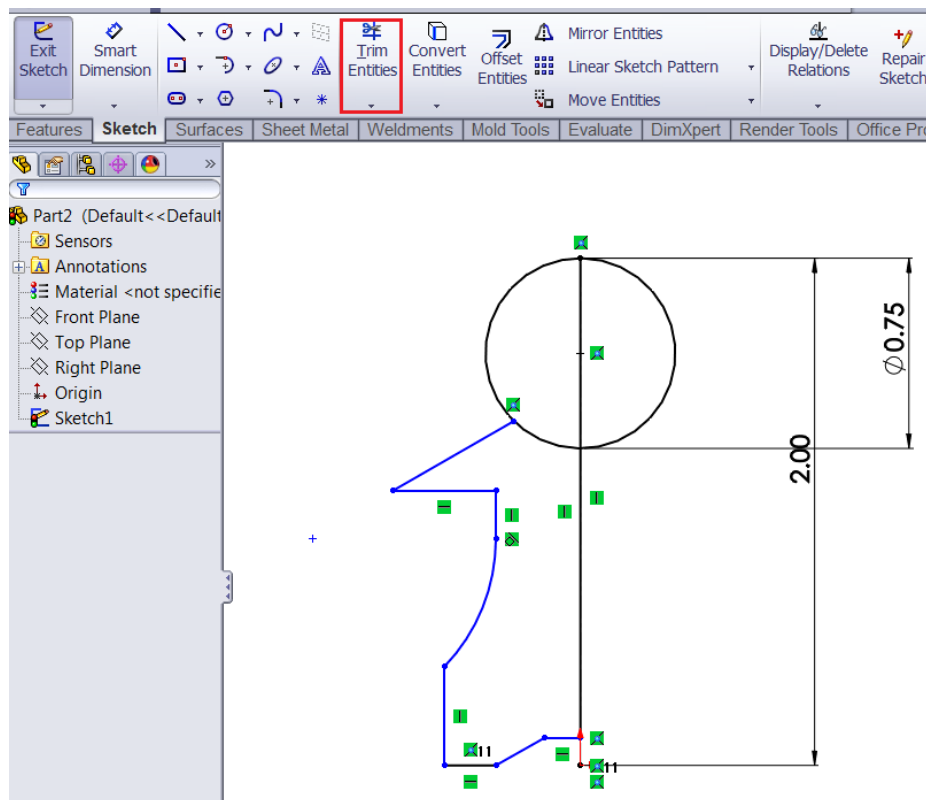

Add the following lines as shown below. To create the **tangent arc**, select the **tangent arc** tool under the **arc** selection highlighted below:
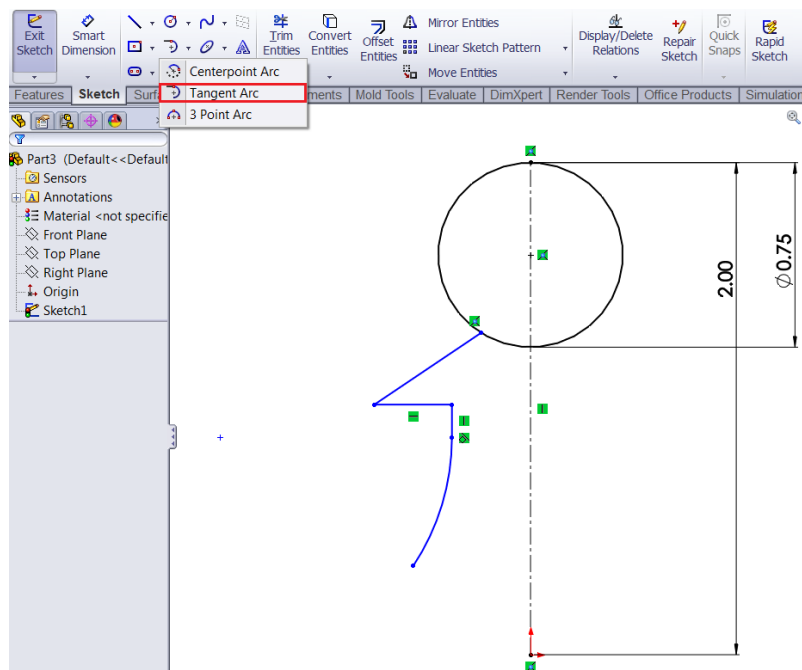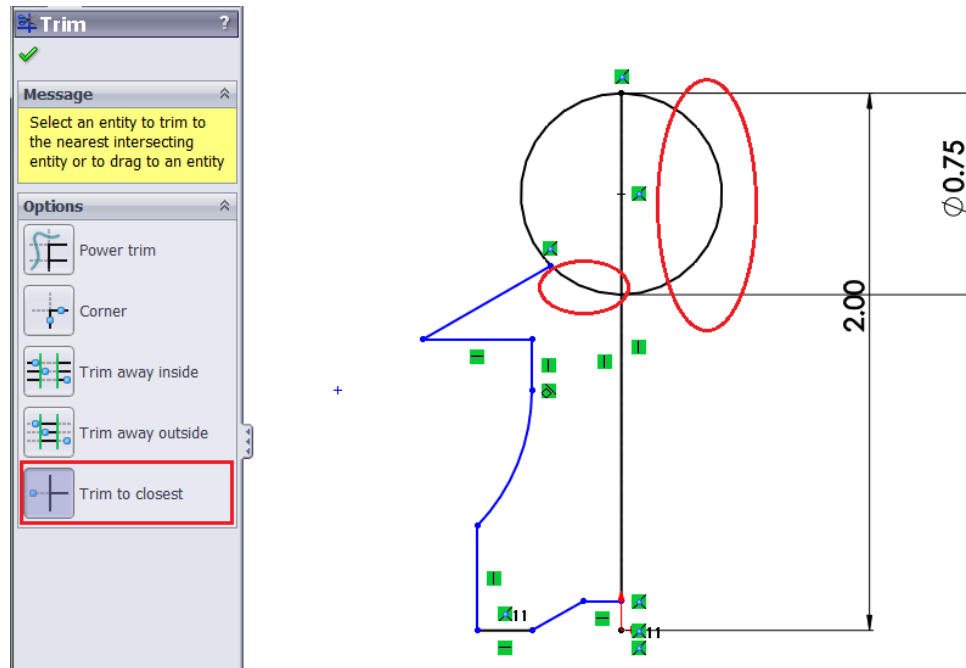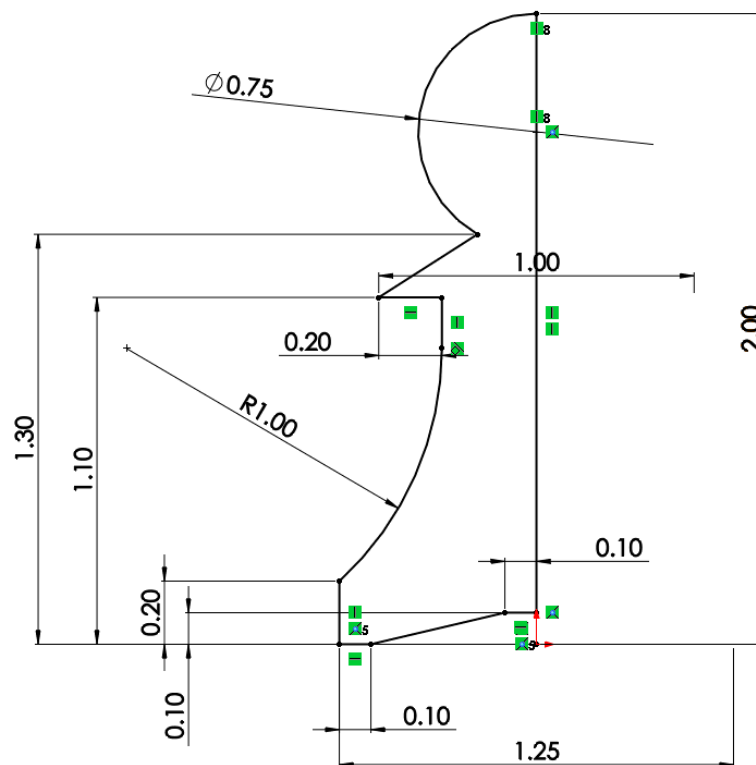
Add the following lines as shown:
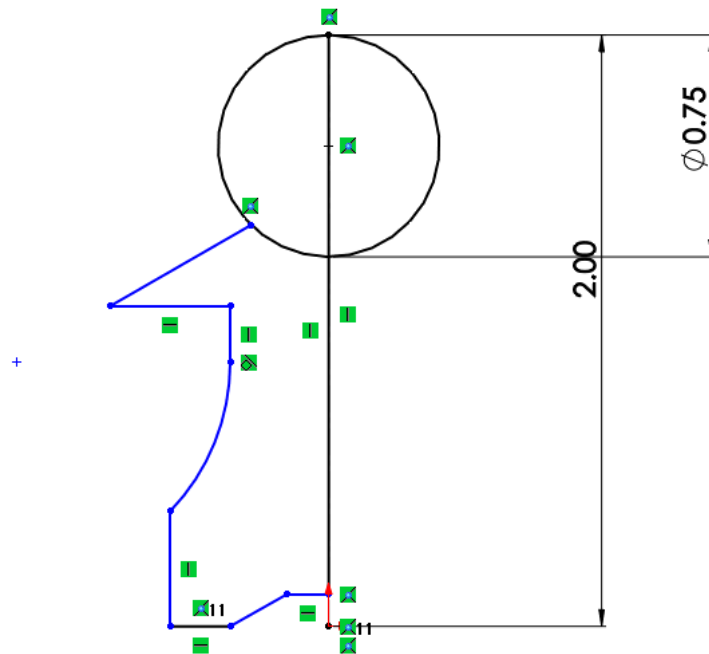
Next, trim away the unneeded lines using the **Trim Entities** tool found under the **Sketch** menu.

Using the **"Trim to closest"** option, trim away the lines highlighted below in red.
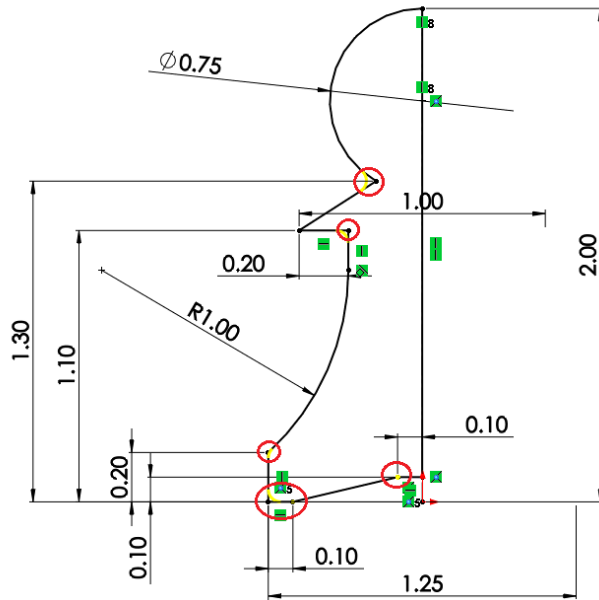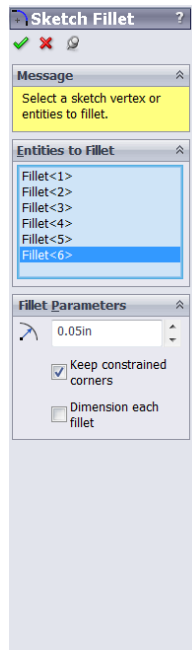

The resulting sketch should look like the one below. Add the dimensions shown in the sketch below to complete the sketch profile:
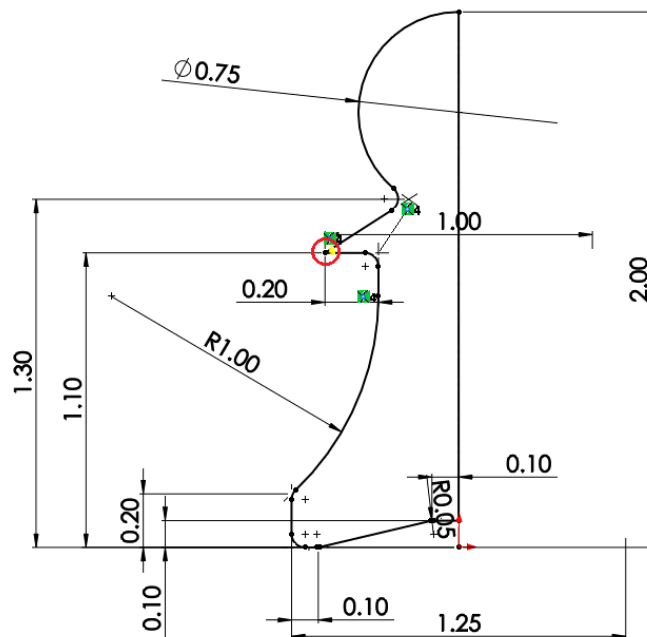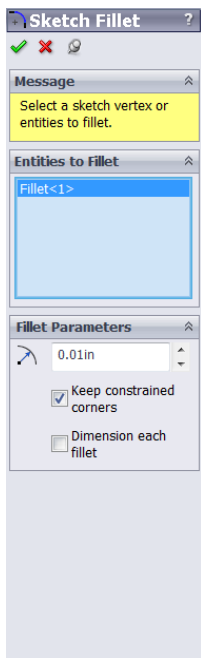
Step 2: Adding Sketch Fillets

Add sketch fillets to the following highlighted vertices. Use a fillet radius of **0.05in.**
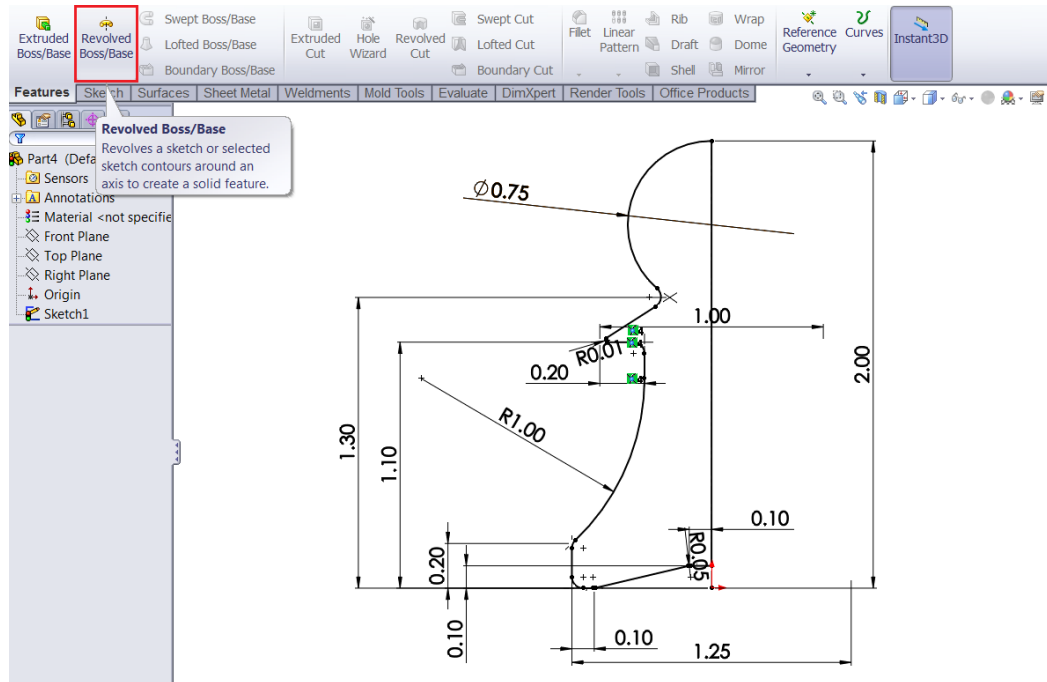

Then add a sketch fillet to the following vertex. Use a filet radius of **0.01in.** The vertex is highlighted below:
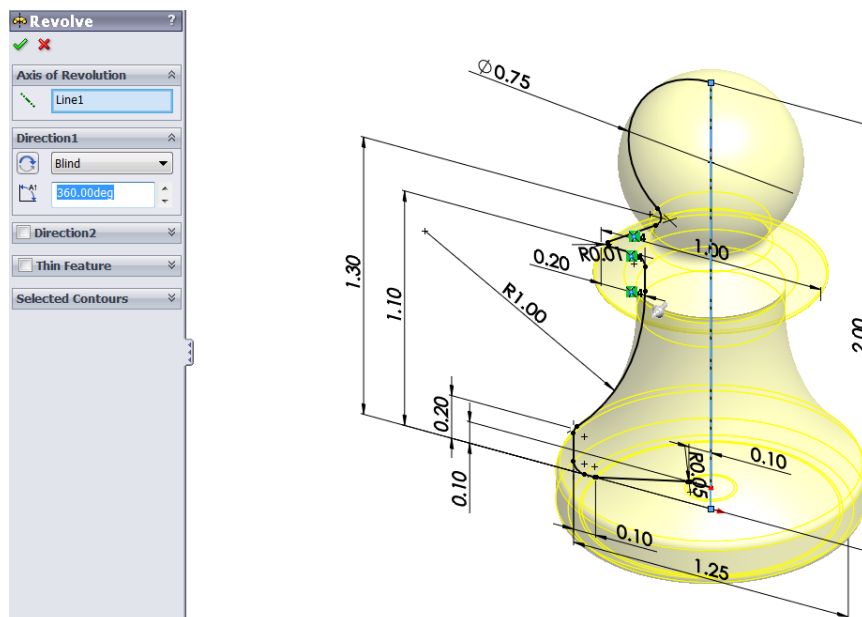
Step 3: Revolving the Sketch

Without exiting the sketch, select the **Revolved Boss/Bass** tool found under the **Features tab** as shown below:

When selecting the **Revolved Boss/Bass** tool, the feature may automatically select the vertical line as the axis of revolution. If not, select the box under **"Axis of Revolution"** and select the vertical line as shown:

Accept the revolve feature; the resulting feature should look like the following:
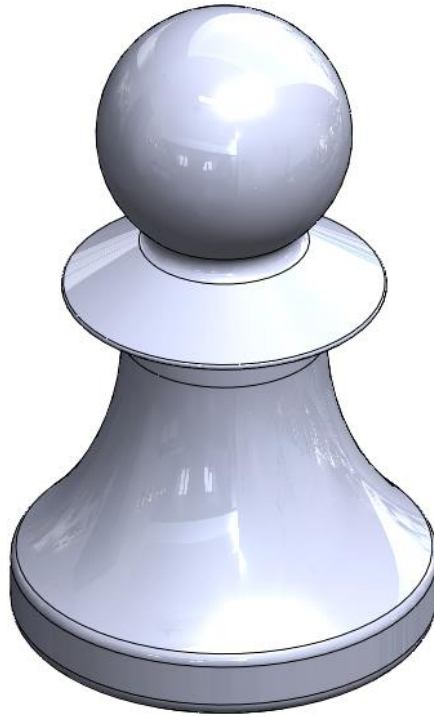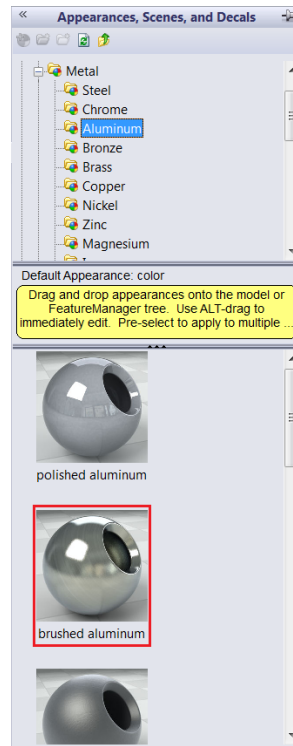

Step 4: Adding Appearances

To add an appearance to the part, select the **Appearance** tab from the menu located on the right of the display pane:

Select **Appearances>Metal>Aluminum** and select **Brushed Aluminum.**

To add the appearance, simply drag the **Brushed Aluminum** image onto the display pane. By dragging it right onto the display pane (the blank area around your part), the appearance is automatically applied to the entire part. If you wanted to apply the appearance only to a particular face, feature, or body, drag the appearance onto the desired face and select the desired options from the popup menu.

The resulting part should look like this:

Step 5: Save and Exit

Save the part as **Simple_Revolve_Pawn.sldprt** and exit the part.