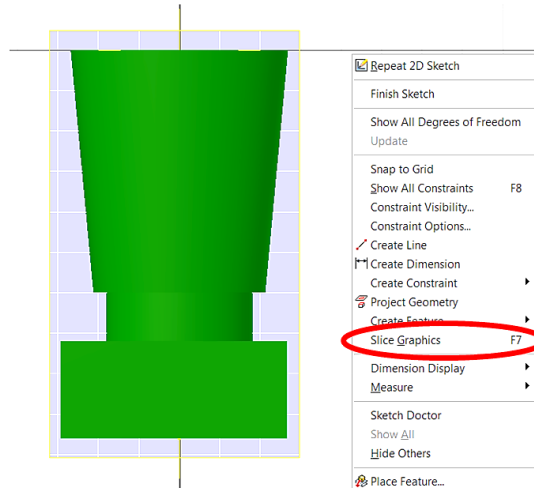


Intersect Extrusions

- Place a work axis through the center point along the long axis of the ellipse of the body.
- Choose a face of the square base that is parallel to the long axis of the ellipse that was used to create the body. Place a new sketch on this face of the square base.

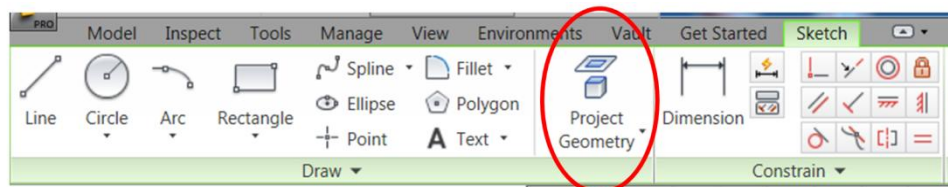
Right click on the sketch and Slice Graphics so that you can see sketch lines that intersect with the existing geometry (see image below).



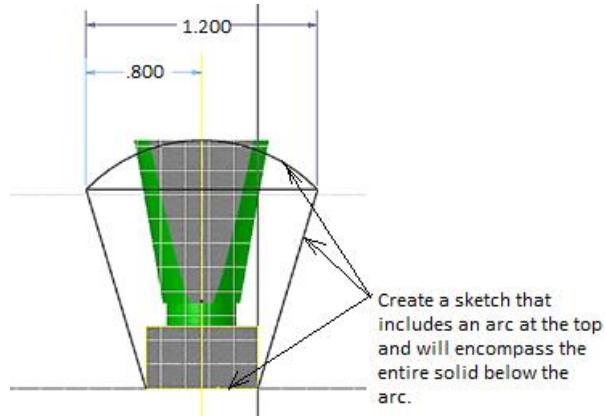
Helpful Hint: Slice Graphics will cut the part at the current sketch plane and remove the solid material in the foreground (similar to a section view). This will allow you to see the geometry at the sketch plane and can provide better visibility of the sketch plane by removing obstructing material.

- Project Geometry** of the work axis onto the sketch.

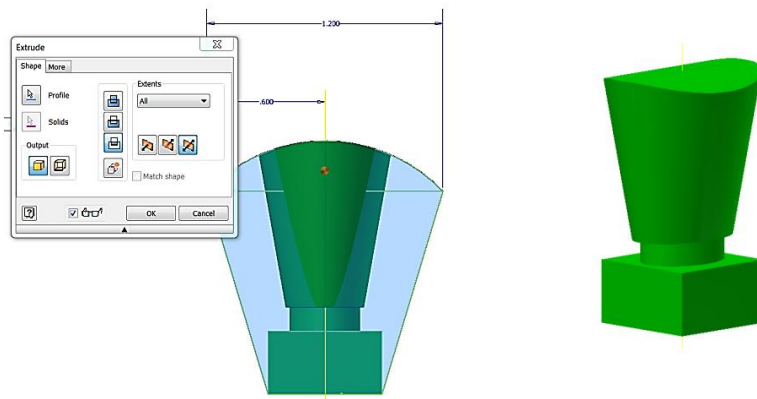
Helpful Hint: Project Geometry is a tool that will project the geometry of previously created features of a part onto the sketch plane so that you may use the geometry in the construction of the sketch. The Project Geometry tool is accessible in the Sketch Ribbon in the Draw panel.



- Sketch an arc and center it on the figure that will approximate the curve of the shoulders on the figure. Do not worry about exact dimensions. Provide a reasonable approximation of the figure shoulder contour (see image below).
- Complete the sketch with lines that will encompass all of the existing geometry of the figure below the arc. Since you will be using the Intersect extrusion tool, you want to include all of the lower geometry within this sketch.



11. Perform a **Mid-plane** (or Symmetric) **Intersect** extrusion. Note that the dialog box may appear different in other versions of Inventor.



12. Create a **Workplane** through the center of the figure and place a sketch on the work plane. Create a sketch to approximate the shape of the head of the figure – do not try to model the shape exactly. Your sketch should include a line on the work axis through the ellipse that you previously created. Then **Revolve** the shape around the work axis of the ellipse that you previously created.

