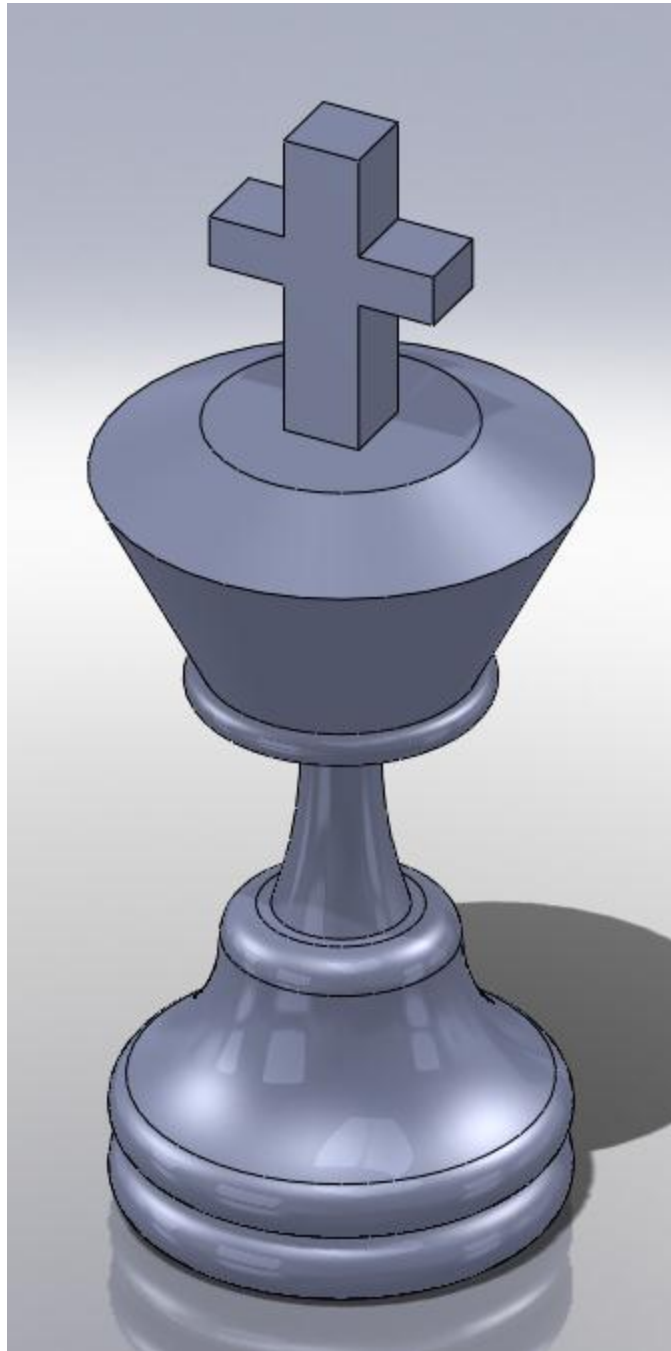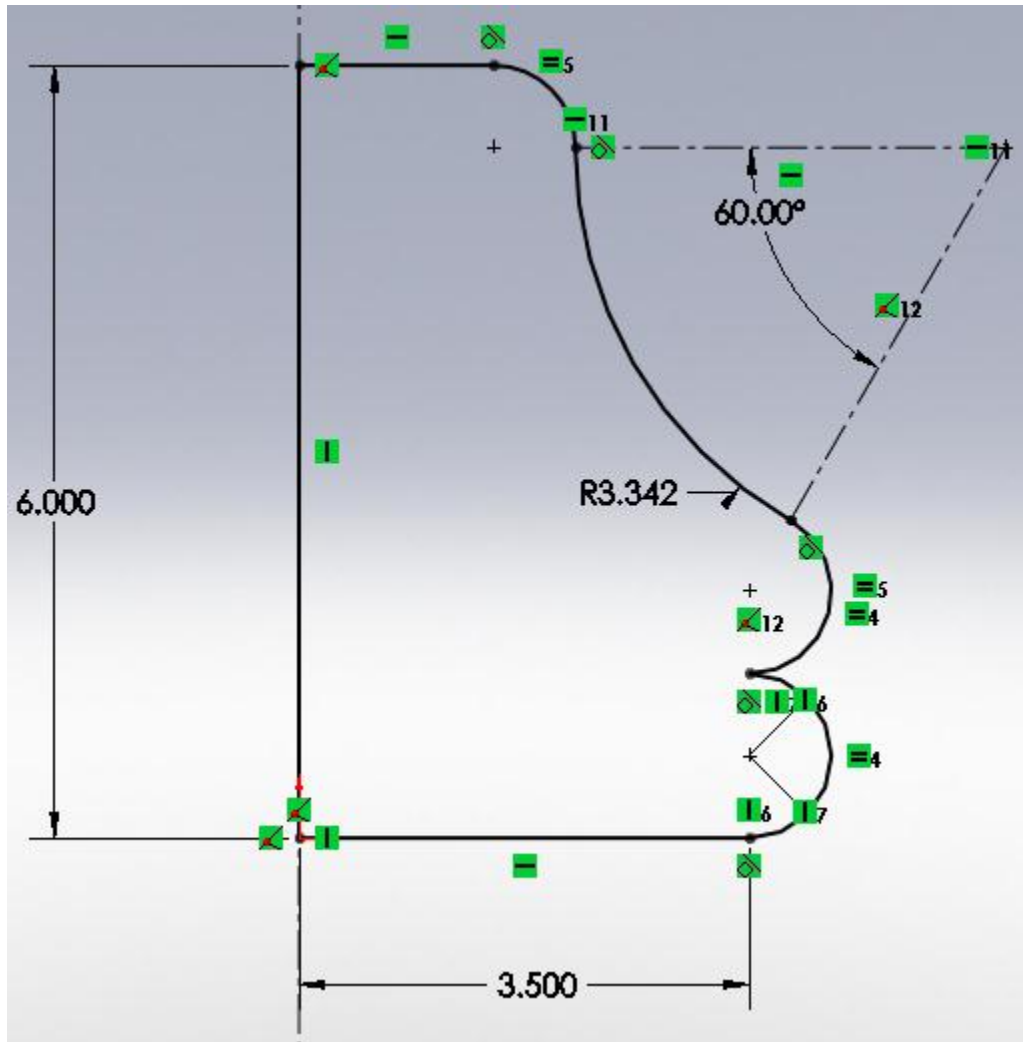# EXAM 2 – Chess King

1. Set units to be **INCHES**.
2. Even though we could make this piece with one revolve, we choose to do multiple sketches with multiple revolves to have multiple, easy to read sketches, as opposed to one complicated sketch.
3. Sketch the following figure on the **FRONT PLANE.**
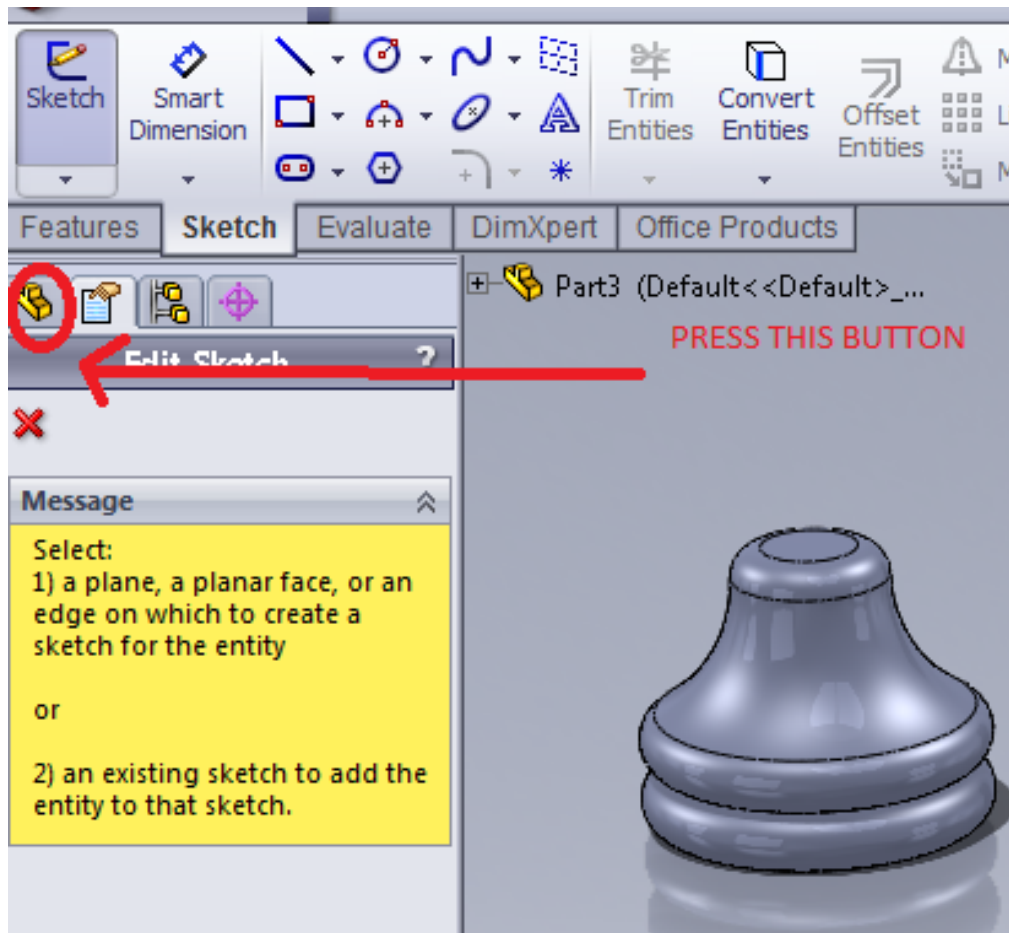

NOTE: ALL THE ARCS ARE TANGENT.

3 ARCS ARE OF EQUAL SIZE.

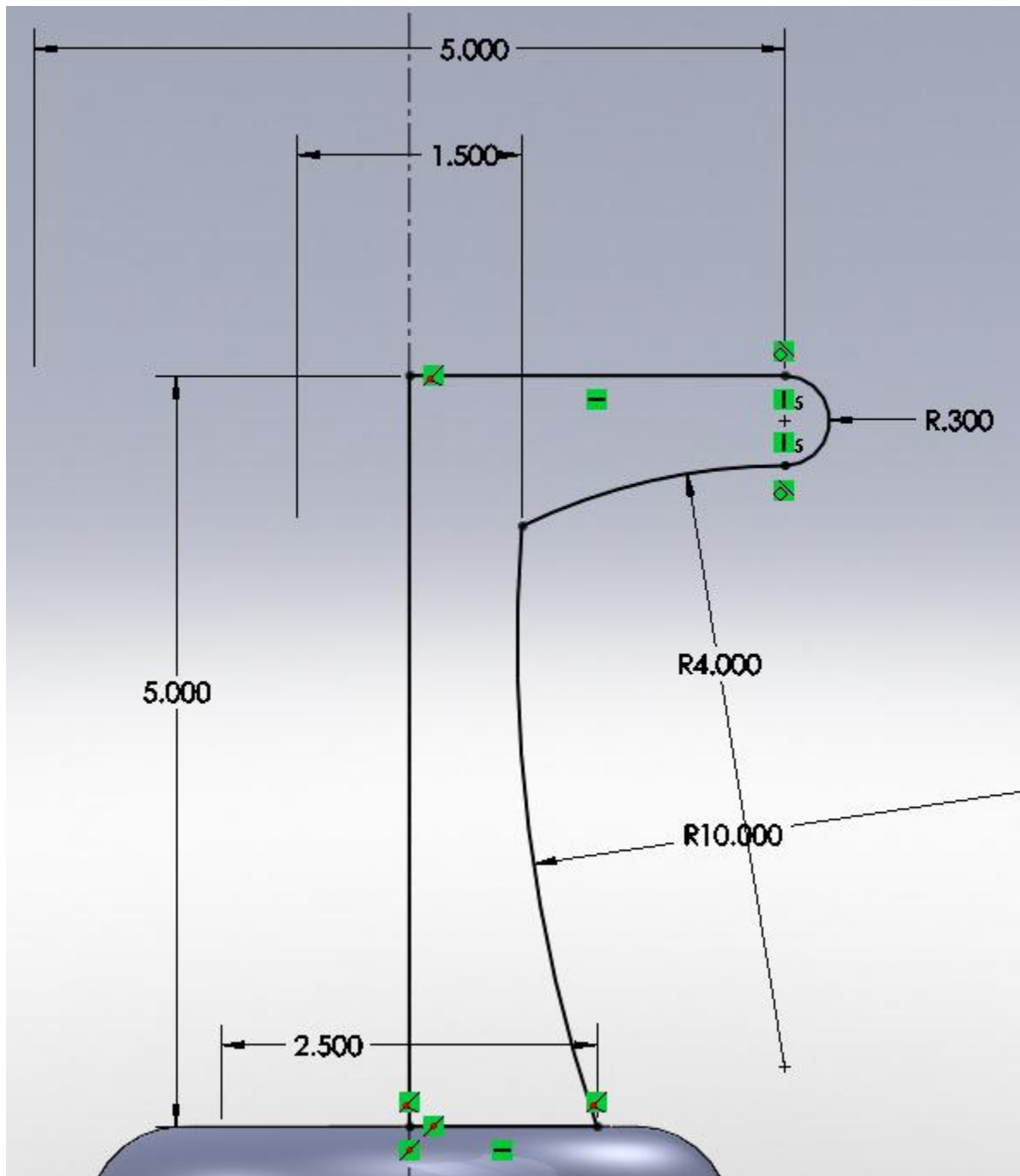THE TWO ENDPOINTS AND MIDPOINT OF THE BOTTOM ARC ARE VERTICAL.

4. Revolve that sketch around the centerline to obtain the following 3-D figure:

5. Create a new sketch, and choose the **FRONT PLANE** as the sketching plane. To do this, click the sketch button to create a new sketch. When it asks you to select a plane or face to sketch on, click on the design tree button, and choose **FRONT PLANE**.

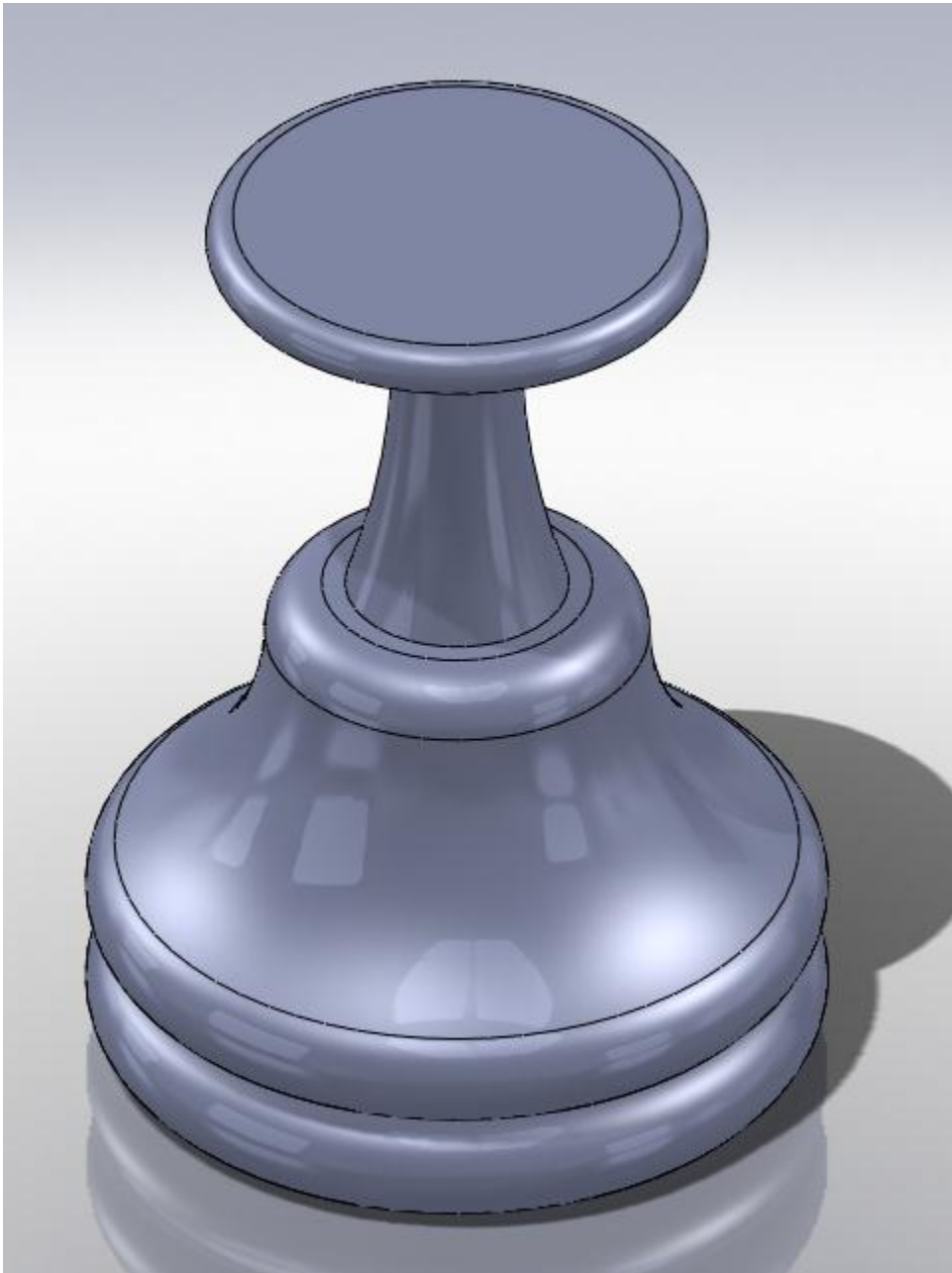6. Make the following sketch on the **FRONT PLANE**:

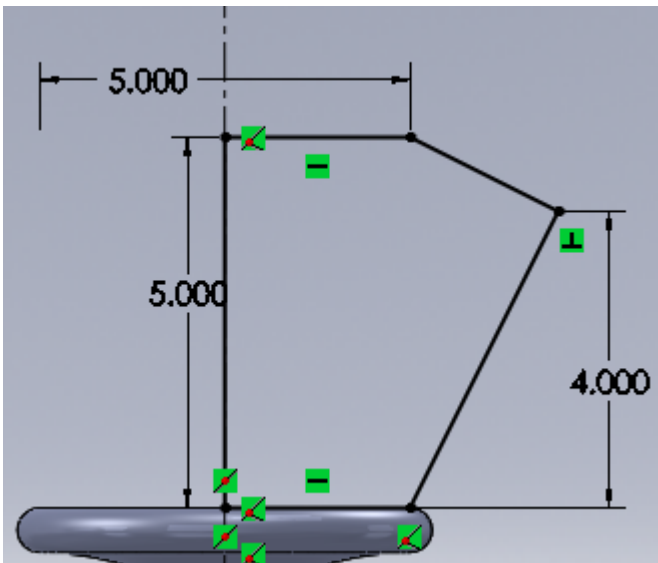**NOTE**: Not all the arcs are tangent to each other.

       The 0.3 in. arc has its endpoints and centerpoint vertical.

       3 of these dimensions are "mirrored" dimensions.

7. Revolve this sketch around its centerline to obtain the following 3-D figure:
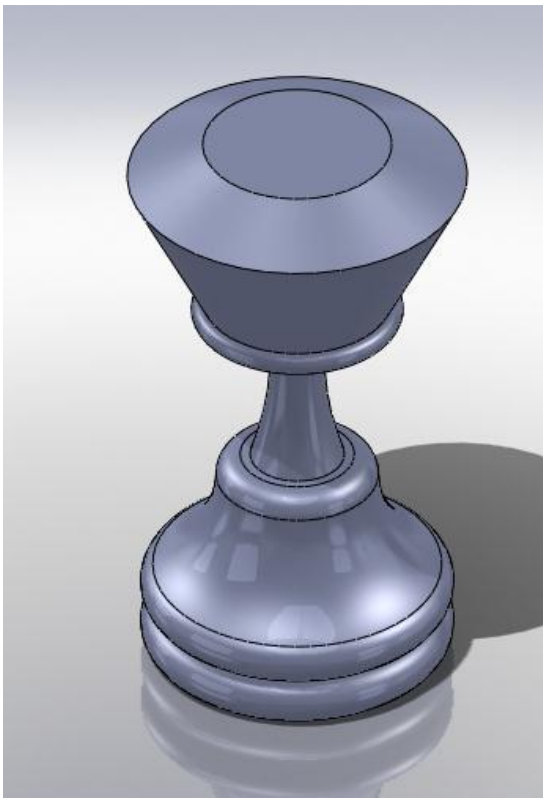
8. Again start a new sketch on the **FRONT PLANE** in the same manner you did just before. Make the following sketch:
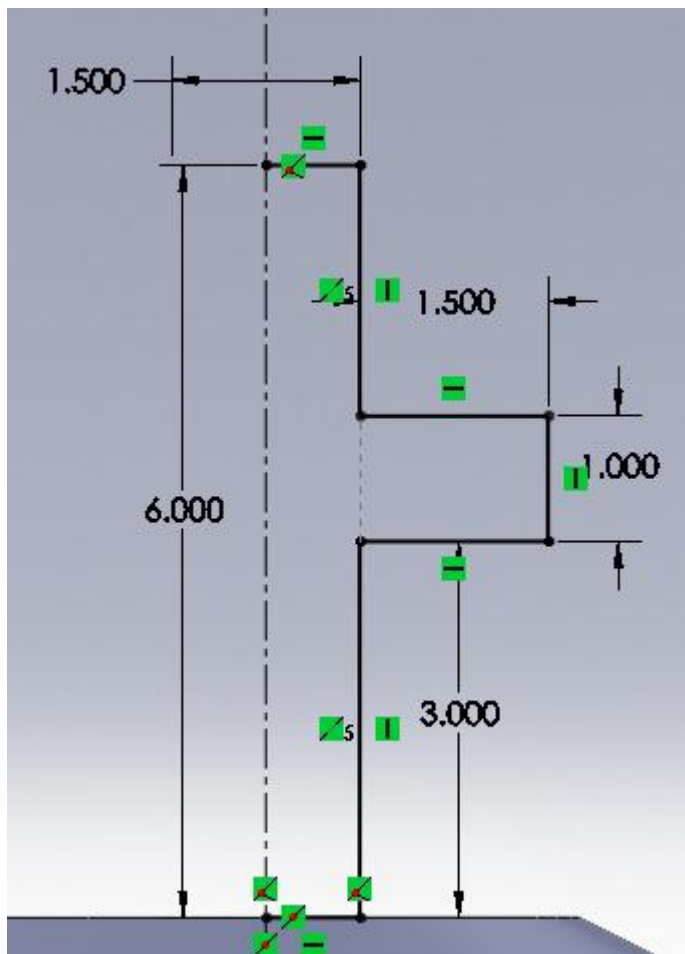

    NOTE: There is a perpendicular constraint between two of the lines.

                 The horizontal line at the bottom extends to the edge of the base.

9. Revolve the figure around its centerline to create the following 3-D figure:
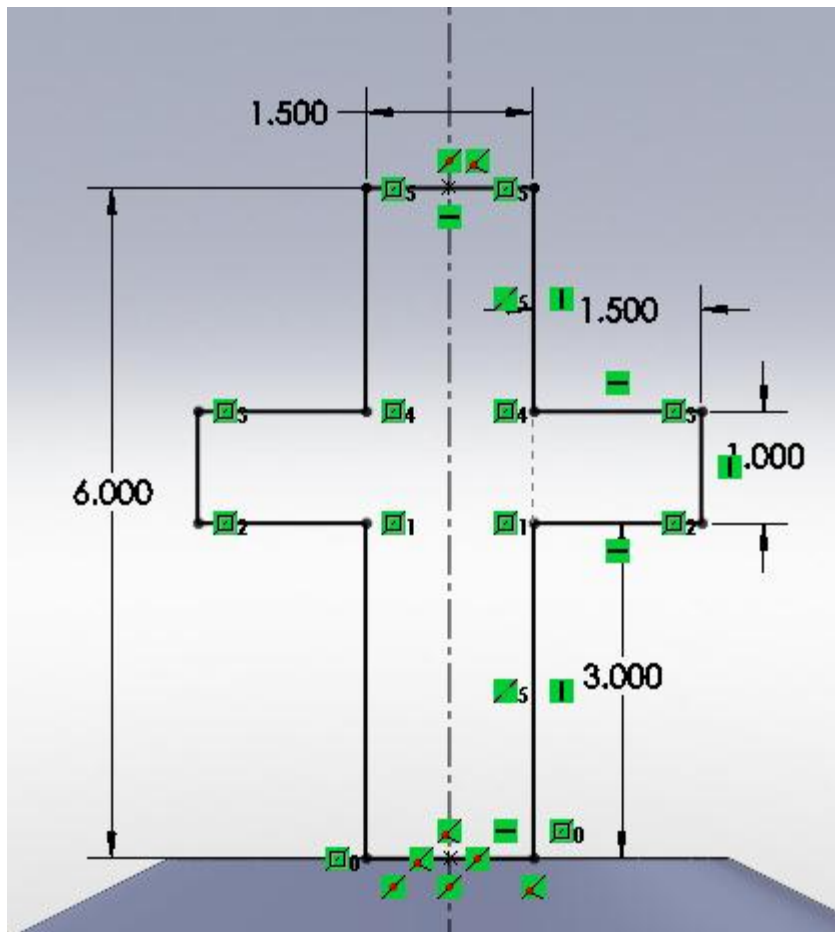
10. Once again, create a sketch on the **FRONT PLANE** in the same manner as before. Make the following sketch:
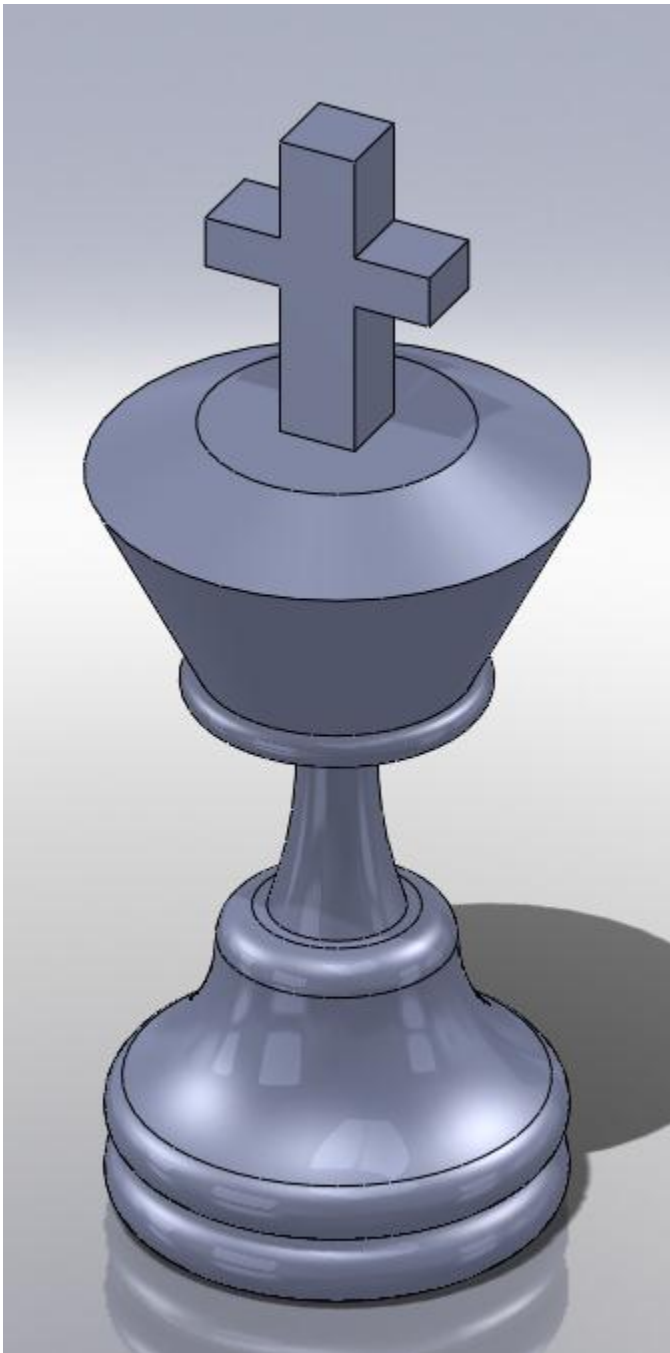

NOTE: All lines are vertical or horizontal.

11. **Mirror** (not revolve) your sketch about the centerline to obtain the following 2-D sketch:

12. **Extrude** (NOT REVOLVE) this sketch in **BOTH** directions a distance of 0.75 in. per direction. The figure is now complete and looks like the following:

EXTRA CREDIT:

- Make an accurate detailed drawing file for the figure you just created.

Save work as "FIRSTNAME_LASTNAME_FINAL.sldprt" (and "FIRSTNAME_LASTNAME_FINAL.slddrw")