

## Simple Math for making a Sphere

Diameter x. 41 will give you the diameter to turn your ends for making a hexagon.

Mark a centerline on the cylinder by rotating the cylinder.


Diameter X. $41 \div 2$ Equals the place from the centerline to where the $45^{\circ}$ cut starts.

Cut your $45^{\circ}$.
You now have an octagon in profile.
Mark a line halfway on each $45^{\circ}$
I like using a $3 / 8$ detail gouge to round off the corners joining the top centerline to the centerline on the $45^{\circ}$. Remove some wood from your spinning axis and continue you curve keeping in mind where the sphere needs to end. Keep about $3 / 8$ of your axis intact. Cut of axis with a hand saw. Each end of the axis piece will now become a cup for holding your sphere.
Place sphere in your cup centers with the cutoff nubs in the plane of cutting. Watch for shadows and remove the ghosting shadow. Draw a new centerline and rotate the sphere in the cups. Remove ghost shadows and repeat. I can usually get rid of the ghost shadow in 3 rotations of the axis.

Sand through the grits rotating the sphere three times per grit

