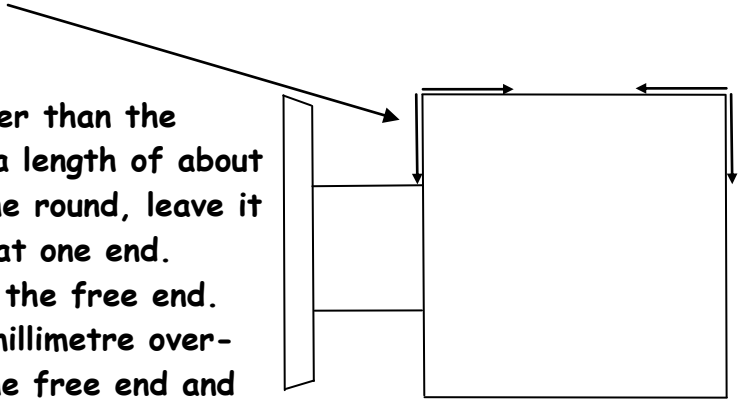
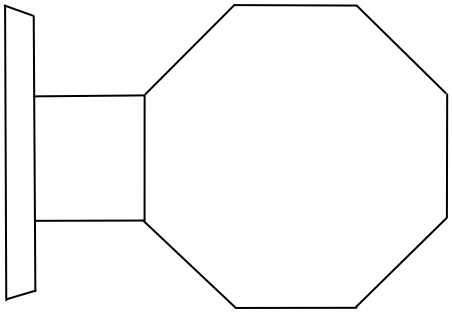
An Easy Approach Ball Cutting

Many jigs have been tried and built, all with varying degrees of success. I now use the method described below, it produces an accurate ball, equally as good as any previous methods I have used.

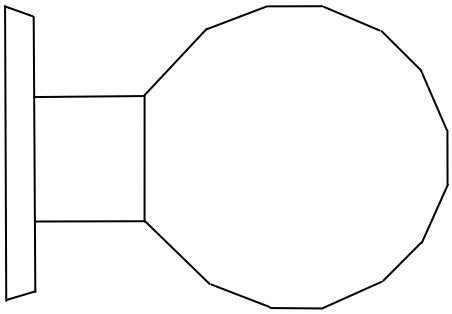
Two Calculations: C1 = Diameter / 3.413 C2 = Diameter / 9.345



Use a wood blank which is a little bigger than the diameter you want to make, and with a length of about one and a half diameters. Turn into the round, leave it a bit over-size, add a dovetail spigot at one end. Mount firmly in a chuck and square up the free end. Reduce the diameter to about half a millimetre over-size. Measure "One Diameter" from the free end and part in on the waste side of the line to the depth defined as "C1". Clear away as much wood as you can to the left of your parting line. Mark 3 more "C1" points on the surface and the free end.



Join the dots on the 2 external corners, leaving an octagonal outline. That should leave you with a blank which looks like this.



Follow the same process using the "C2" dimension, either side of the 3 external points on the octagon. Join the dots on the 3 main corners. Use a small gouge and sandpaper to remove the remnants of any corners, leaving you with "almost a ball". Don't forget, your blank is only half a millimetre over size so be gentle with the sanding.

Reduce the diameter of the main spigot to get the remaining "C2" marks in, turn away the waste and sand. Part off with a thin parting tool and hand sand to a finish.

To convert into an owl, mark the eye centres "D / 4.269" either side of the centre line, and cut them to "D / 1.8" diameter.

Jon Simpson.

Intended Diameter:

C1 = D / 3.413

C2 = D / 9.345

For A Simple Owl:

Eye Separation = D / 4.269

(left and right of the centre line)

Eye Diameter = D / 1.8