Spheres - Octagon Method

Three measurements are critical:

1. Diameter - as measured on the work piece.

2. Octagon corners - 0.293 x the diameter

3. Octagon sides - 0.414 x the diameter.

Calculations in decimal or metric are easier!

D = Diameter
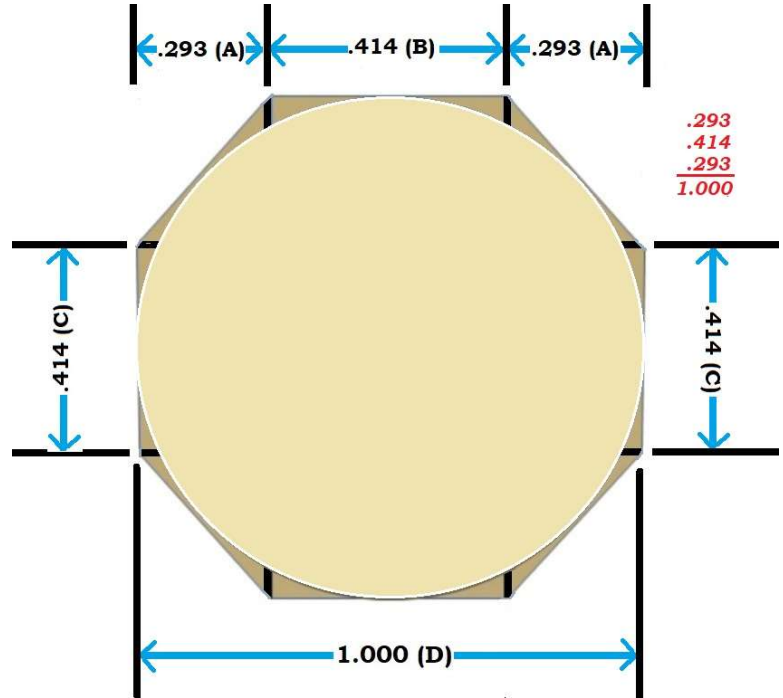
A = D * .293

B = D * .414

C = B

Example:

Blank diameter is 2.300 inches

Then A = 0.6739

And B = 0.9522

And C = 0.9522

.293 (A) — .414 (B) — .293 (A)

.293
.414
.293
1.000

.414 (C)

.414 (C)

1.000 (D)

Your project:

D (Diameter) = _____

A: D *.293 =   _____

B: D *.414 =   _____

C: B = C   _____

Spheres - Octagon Method

There are dozens (maybe hundreds) of ways to turn a sphere.

This article (http://www.docgreenwoodturner.com/turnspherefour.html) summarizes four different methods.

I don't use the shadow method …
 http://www.docgreenwoodturner.com/sphshadowmethod.html
… but many turners do with considerable success.

If you really want to get into the weeds on the 'Shadow Method', turner David Reed Smith has a detailed article on his website:
http://www.davidreedsmith.com/articles/shadowspherejig/shadowspherejig.htm

David Reed Smith's article also details his method of building the 'cups' for your lathe's headstock and tailstock. He also shows how to use CA glue to enhance the hold on your sphere while turning it!

If you do a Youtube search for 'turning spheres on a lathe', you will turn up a number of very good videos on the subject. My favorites are by Mike Peace, Alan Stratton (As Wood Turns), and Sam Angelo (Wyoming Woodturner).

Happy turning … Stay Safe!

Gerald R. Jensen – April, 2019