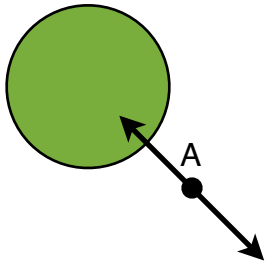
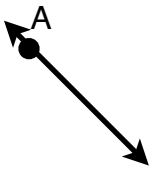
A sphere can be obtained by summing the areas of a circle through a gradual increase in diameter (maintaining proportions which is essentially expanding at exactly a 45 degree angle).



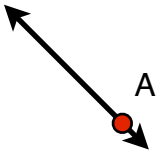
Point A goes through the entire line. Point A is one point on the circumference of the circle.



Point A starts here (where the radius of the circle is 1/infinity).

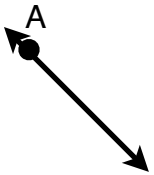
It'd be interesting to look at the movement of point A:
Does it have an acceleration?
What is its velocity?

All we know is that area is 4/3 pi r^3 or something.

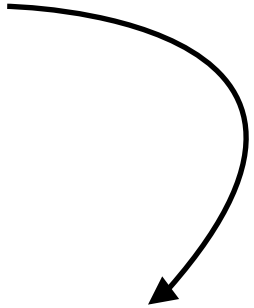


Point A ceases here for a moment and begins its movement back to the starting position. This is the divide of symmetry.

We realize that the cross sectional symmetry exists if the points go through the line twice only with the opposite direction (velocity vector is positive and then negative).



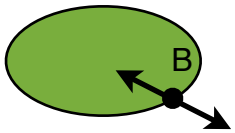
Point A's travel ends here.



Abstract question: Is the number of summed surfaces even or odd? If there is only one point where the rate of change is zero; odd. If two; even. I'd say odd because three dimensional surfaces have planar tangents.

I think that to create a sphere we vary the radius in accordance with the curve of a circle.

An ellipsoid can be obtained by summing the areas of an ellipse through a gradual increase in its large and small diameter (maintaining the same large and small diameter ratio which may be obtained (?) by expanding at a consistent angle (0<45<90)).



Point B will move about exactly like point A. The questions are the same:

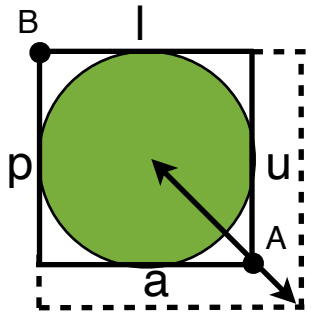
Will it have an acceleration?
What will the velocity be?

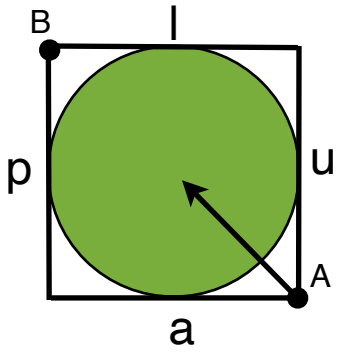
I have the feeling that much of the formulas for calculating the volume of three dimensional figures can be derived from any answers to these questions.

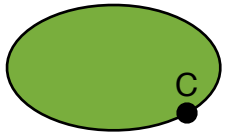
B remains static in space during the transformation but A moves through the range of values (indicated by the double arrow line).

I need to explicitly define *what* I'm changing because right now it's really only described as the corner of a computer resize box.

I think I'm changing the intersection point of two tangents to the object while the other two tangents' intersection point remains static.





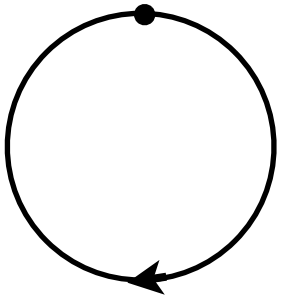


The entire purpose of this document is to determine what kind of three dimensional shape this would yield. We alter the large and small diameter at varying rates (in accordance to the sine and cosine components of the circle's radius to point C) (?)

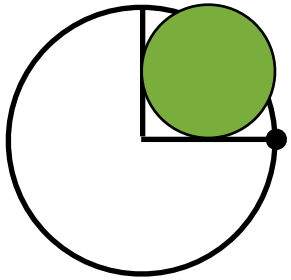
A second question is what would happen if a surface were to undergo an elliptical transformation?

Side question: what do the sine and cosine graphs look like for an ellipse?

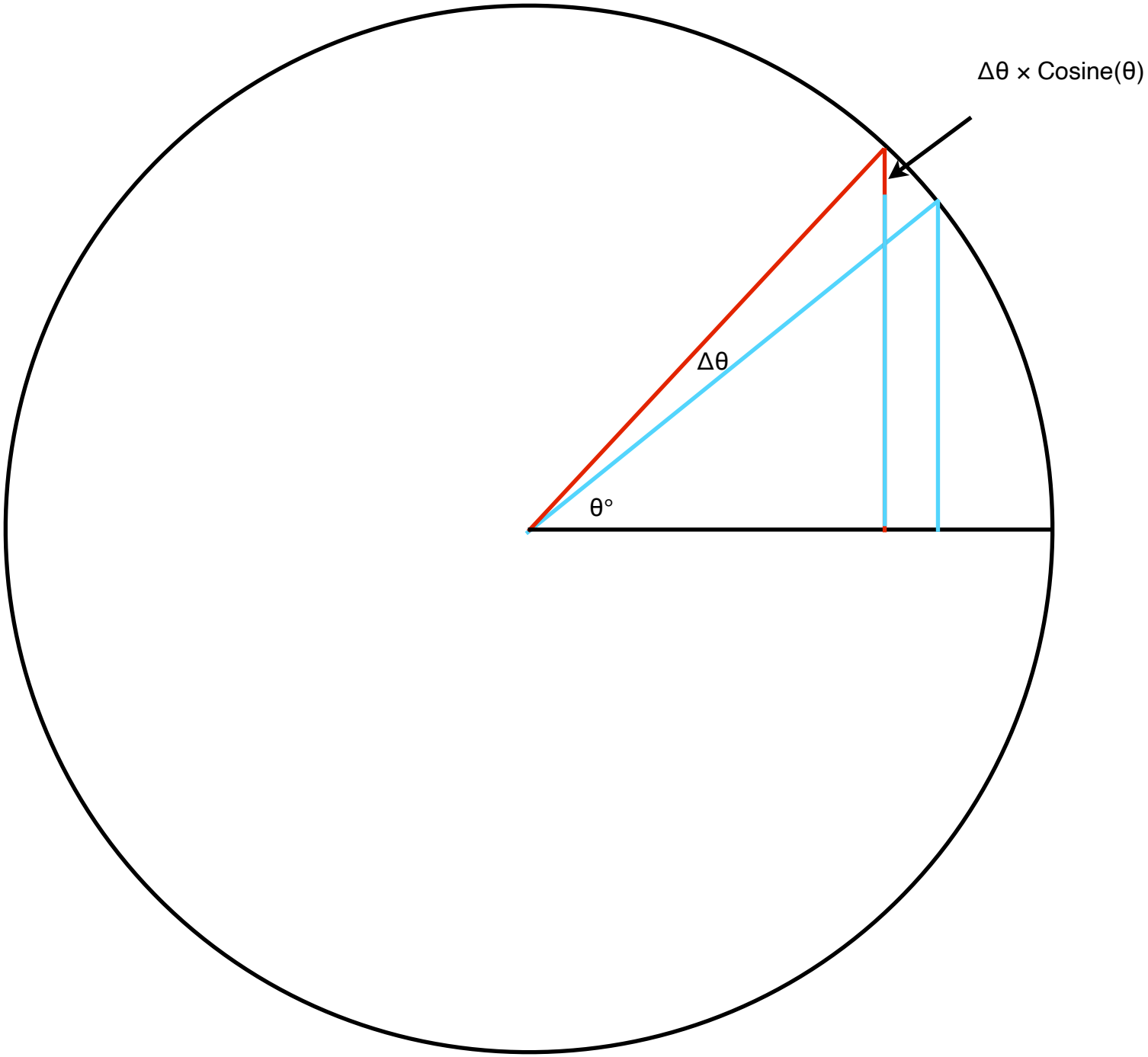
Starting point (the small and large diameter are both 1/infinity, so there is instantaneously an infinitesimal circle at this point).



I believe that, at this point, a circle arises but only instantaneously. I'd like to prove this using sine and cosine...



It seems cross sectional symmetry requires only one revolution through the circle. That's probably because the circle is comprised of two semicircles which are mirror images of each other (the vector at each point on one semicircle is the negative vector at the same point on the other).


Δθ × Cosine(θ)
Δθ
θ°