2. First, we have that:

We can see that this trace is created by a circle which is continuously moved along the y axis, so the x and z coordinates will be some variation of cos and sin of some expression.

We have

And so we know that when s =, then x = 0.

We also know that when s = 0, then, x = 0. In order to get 8 full circles in the span of 16 *,* we have to have the expression cos(s and in order to adjust for the starting and 0 points, we add to the angle, leaving us with cos(s+. The final adjustment is for the radius which is 1.5 (we have we get:  
**x = 1.5cos(s+**

Y changes constantly and ranges from so we get:

**y =**

The definition of z comes similarly to x; the only difference is that the circle radius is at a distance of 3.5 from the XY plane, because and so we get:

**z = 3.5 +1.5sin(s+**

1. (s) is the perspective projection of α(s), so for every point p we will define its projected point so we substitute the terms and get: