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**Alexander L. Garron\*** (alexander@sandboxgeometry.com), 2502 Park Place, Springfield, NJ 07081. *Using Analytic Geometry and Computer Algebra to Construct Gravity Field Energy Curves.*

I have always been interested in finding a utility for plane geometry to study mechanical energy curves of the gravity field. To do so I invented a Curved Space Division Assembly, acronym CSDA, the parametric graphing assemblage of two plane geometry curves (unit circle as independent curve and unit parabola as dependent curve) that I use to explore mechanical properties of gravity field changing acceleration causality of orbit motion in curved space. To explore mechanical properties of g-field curved space requires a plane geometry construction of Sir Isaac Newton's Inverse Square Law of Gravity to prescribe available energy of the system controlled by M1 producing orbit motion of M2. This paper will use Mathematica to demonstrate high school STEM methods needed to do so. A first ever analytic geometry construction of the connecting principal joining inverse square field properties of curved space with its linear meter primitive radius following orbit motion in physical square space. I will demonstrate means to apply CSDA analytics on mechanical energy curves of our Earth/Moon system proving construction results using Sir Isaac Newton's Universal Law of Gravity. (Received August 21, 2014)