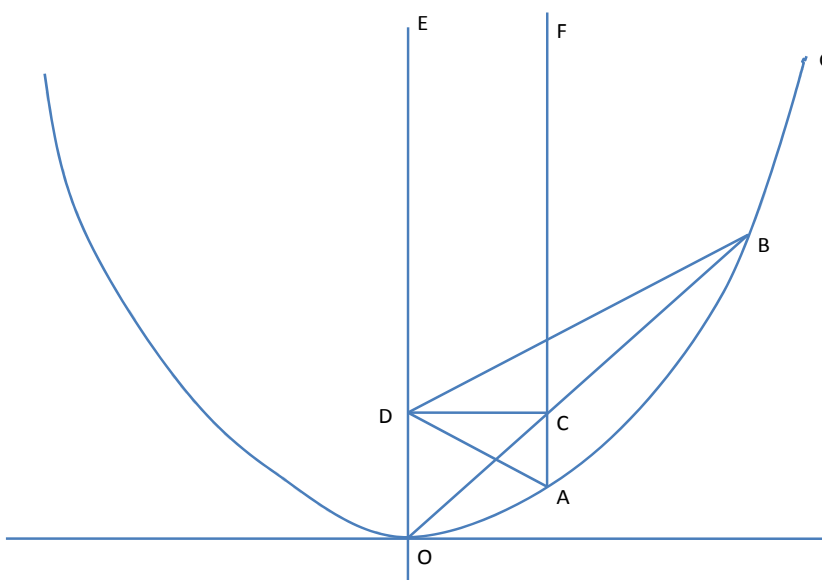


Contact: Greg Markowsky, gmarkowsky@gmail.com

Problem 1: Let OG be a parabola with vertex O and axis OE . Let A and B lie to the right of the axis, with B closer to G than A . Draw OB , and draw AF parallel to OE . Let C be the intersection of AF and OB . Choose D on OE so that CD is perpendicular to OE . Connect BD and AD . Show that $\angle ADO = \angle BDE$.



Problem 2: Let a triangle be inscribed in a circle of radius R , and let the incircle of the triangle have radius r . Let the distances along the perpendicular bisectors of the sides of the triangle be denoted a , b , and c . Prove that

$$2abc = r^2 R$$

