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The Ellipse, Monge’s Circle and Other Circles

New developments of the author’s research project on the geometry of conics are presented. For any general point P taken on a given ellipse H , some triplets of collinear, peculiar points are described; several angles sharing the same vertex are shown to share the same line as bisector, too. Three new circles linking points belonging to the ellipse H , Monge’s circle and other conics introduced by the author (the symbiotic ellipse H_Σ and the circle Φ_1) are described. Unsuspected relationships linking the newly defined objects with a circle previously introduced by the author (denoted *circle* Ω) are described.

Keywords: Ellipse, collinear points, angle bisector, concyclic points, symbiotic conics, Monge’s circle, bridge-circle.

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