# The Sum of the Double Forces of the Distances Between the Cusp Points in the Same Plane Regular Polygon and P Point in the Plane

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Leibniz theorem is the starting problem of our research problem in the literature. A generalization has been made on the polygons on a plane. The practices of Leibniz theorem on regular polygons exist. We wondered if we could obtain connections related to the sum of the double powers of the distance of a regular polygon and a P point on the same plane from the corners of the regular polygon. We transferred regular polygons on the coordinate plane and we described the cusp points as complex numbers.We searched the sum of the double forces of the distances between the cusp points in the same plane regular polygon and P point in the plane by using the properties of the complex numbers and trigonometric power formulas. The problem that we searched and worked on is more general than the ones which were worked on previously. By doing that we made another new contribution to the problem.

**Awards Won:**