BROUWER'S FIXED-POINT THEOREM IN PLANE GEOMETRY

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ABSTRACT

This study is about the proof of the theorem known as the first basic Fixed-Point Theorem found by L. E. J. Brouwer between the year 1909 and 1913 in plane geometry. As known, there have been other studies on fixed-point after Brouwer, other theorems were presented, proven and brought into the literature. When we look at these theorems, we see that they are usually used by fields such as analysis and topology in Turkey and abroad as significant tools with applications. In this article on the other hand, we will prove Brouwer's theorem that **'C** being a unit sphere on R^n there is a fixed-point for the function f: C → C in continuous transformation [7],' using concepts of expansions/compressions, pushes and rotations in plane geometry.

Keywords: Fixed-Point Theorem, Plane Geometry, Expansion/Compression, Push, Rotation.