

Comments As in the case of the Contraction Lemma, existence of fixed points leads to existence of solutions to certain equations.

In some cases these solutions yield insight into questions in other subjects.

EXAMPLE. Economics — Brouwer's Theorem leads to results on the existence of economic equilibria. In 1983 K. Arrow and G. Debreu shared a Nobel Prize in Economics for their work on such questions, and in 1994 J. F. Nash shared another such prize for his work on such questions (in his undergraduate thesis!)

Here is another article dealing with applications of the Brouwer Fixed Point Theorem:

A. T. Winfree, Sudden Cardiac Death: A Problem in Topology. Scientific American, Vol. 248 (May, 1983). SEE ALSO
M. Shubert, Fixed Point Theorems. Scientific American, Vol. 214 (Jan., 1966).