

# Fuzzy Decision Making Problem in Hexadecagonal Fuzzy Number

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**Abstract:** *The aim of this article is to address the fuzzy decision making problem (FDMP) utilizing Hexadecagonal fuzzy numbers. We initiate the evaluation of the Payoff matrix through Hexadecagonal fuzzy numbers. We transform the fuzzy decision making problem into a crisp valued decision making problem by employing a ranking method for the payoffs. The crisp valued decision making problem can be effectively formulated using the savage mini max regret criterion.*

**Keywords:** Fuzzy decision making problem (FDMP), Hexadecagonal fuzzy number, membership function, Pay off matrix

