

INTERVAL-VALUED (α, β) -FUZZY SUBGROUPS II

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Abstract. In continuation of [13] we provide characterizations of an interval-valued $(\in, \in \vee q)$ -fuzzy subgroup. We show that a proper interval-valued (\in, \in) -fuzzy subgroup $\hat{\mu}_F$ of group G such that $\# \{\text{Im}(\hat{\mu}_F)\} \geq 3$ can be expressed as the union of two proper non-equivalent interval-valued (\in, \in) -fuzzy subgroup of group G . Finally, we also prove that if $\hat{\mu}_F$ is a proper interval-valued $(\in, \in \vee q)$ -fuzzy subgroup of group G such that $\# \{\hat{\mu}_F(x) | \hat{\mu}_F(x) < [0.5, 0.5]\} \geq 2$, then there exist two proper non-equivalent interval-valued $(\in, \in \vee q)$ -fuzzy subgroup of group G such that $\hat{\mu}_F$ can be expressed as the union of them.

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