

This thesis provides a classification of the minion homomorphism preordering and minion cores within a class of multi-sorted Boolean clones. These clones can be described as those clones defined on the set  $\{0, 1\}^k = \{0, 1\} \times \{0, 1\} \times \cdots \times \{0, 1\}$ , where the clone operations act component-wise on the  $k$ -tuples, which are determined by multi-sorted unary or binary relations.

The second chapter of this thesis focuses on presenting the key findings. We introduce specific minion cores and establish the preordering among them. Furthermore, we prove that each clone falling under the aforementioned type is equivalent to one of these minion cores.