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# THE ALPHA STAR-PERFECT MAPPING IN TOPOLOGICAL SPACES

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## ABSTRACT

In this paper we introduce new types of  $\alpha^*$ -continuity mappings by using  $\alpha^*$ -open sets in topological spaces which is called alpha\*-perfect mapping, also we study some properties of these types. Some definitions are given. We show that if  $f : X \rightarrow Y$  is ( $\alpha^*$ -PM). Then the restriction of  $f$  on clopen set is also ( $\alpha^*$ -PM). Next, for any mapping  $f : X \rightarrow Y$  between two topological spaces with  $A, B$  are disjoint clopen sets, where  $X = A \cup B$ . In this work, we show that  $f|_A$  and  $f|_B$  are ( $\alpha^*$ -PM) if and only if  $f$  is ( $\alpha^*$ -PM). Finally, we prove that if  $f : X \rightarrow Y$  and  $g : U \rightarrow W$  are mappings with  $f \times g : X \times U \rightarrow Y \times W$  is ( $\alpha^*$ -PM), then each one of  $f$  and  $g$  is ( $\alpha^*$ -PM).

**Keywords** *alpha*-open sets,  $\alpha^*$ -open sets, perfect mapping, continuity mapping,  $\alpha^*$ -irresolute continuous mapping.

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