



Math for the people, by the people.

index set theorem

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Index Set Theorem: *If A is an index set and $A \neq \emptyset, \omega$, then either $K \leq_1 A$ or $K \leq_1 A^c$.*

In the statement of the theorem, K is the halting set $\{x : \varphi_x(x) \text{converges}\}$, \leq_1 is the one-one reducibility (or 1-reducibility) relation symbol, and A^c stands for the complement of the set A (relative to ω).