

# Optimal General Maintenance for Discrete Lifetime Distributions

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## Abstract

In many applications the clock time is not the best scale in which to describe lifetimes. As example, if a unit has a sequence of tasks to perform, then its lifetime is measured by the number of tasks performed before its failure. We consider discrete lifetime distributions. When the item fails, it is minimally repaired. Additionally, from time to time maintenance actions (pm) are carried out. We assume, that these maintenance actions do not renew the item, but reset the age of the item to some level between zero and the real age. A suitable function which describes the cost of a pm in dependence on the degree of repair is considered. Optimal maintenance policies are found for both, the optimal interval between pm's and the optimal degree of repair.