

INVARIANCE RELATIONS IN SINGLE SERVER QUEUES WITH LCFS SERVICE DISCIPLINE*

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Abstract. This paper is concerned with single server queues having LCFS service discipline. We give a condition to hold an invariance relation between time and customer average queue length distributions in the queues. The relation is a generalization of that in an ordinary GI/M/1 queue. We compare the queue length distributions for different single server queues with finite waiting space under the same arrival process and service requirement distribution of customer and derive invariance relations among them.

Key words and phrases: Queue, last-come-first-served, invariance relation, loss system.