REPLENISHING STOCK UNDER UNCERTAINTY

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ABSTRACT

A stock replenishing model is considered whereby not only the demand for the item, but also the stock in hand and the lead time period are considered to be random variables. The interrelations of these three item characteristics are then studied in the framework of a scheme for deciding when to place an order for additional material. The effect of a Pareto/Yule type distributed demand in determining the stock level at which to reorder is then examined and the results are subsequently looked upon in terms of the lead time distribution.

Keywords and Phrases: reorder point system; inventory model; stock replenishment; Pareto distribution; Yule distribution; demand distribution.