

ECON 219: Problem Set #3

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Problem 1

Suppose that a certain wine dealer is in possession of a particular quantity of wine, which he can either sell at the present time ($t = 0$) for a sum of K dollars or else store for some length of time and then sell at a higher value.

1. Present an expression for the growing value (V) of the wine as a function of time.
2. Explain under what assumptions the maximization of profits is the same as maximizing the sales revenue (V).
3. Under the assumption of part b, present the maximization problem of the wine dealer.
4. Present and interpret the first order condition of the previous problem.
5. Present and interpret the second order condition of the wine dealer's problem.
6. Obtain the optimum length of storage time.
7. Confirm that the previous answer defines a maximum and not a minimum.