6/. (Continued). The standard deviation marks the spread of the Gaussian distribution. Since it drifts with time the spread also drifts away to large values, and hence large fluctuations (instabilities) are more likely. Since $\sigma \propto \sqrt{\phi(t)}$, $\phi(t)$ was given the name instability function.

7/. Page 41: i) The points of inflection occur for $\boxed{x = \sigma = \pm\sqrt{\phi/2}}$ → The standard deviation (NOT variance).

ii) In the graph the maximum is $1/\sqrt{\pi\phi}$.

8/. Page 65: Portfolio value $\boxed{\Phi = \delta_H S - G}$

δ_H is number of shares, S is the price of a share and G is the value of the option. Hence, $\delta_H S$ is the value of δ_H shares.

Dynamical Systems

1/. Page 1: $\frac{dx}{dT} = F(x) \therefore \frac{d^2x}{dT^2} = \frac{dF}{dx}\frac{dx}{dT}$

Since $F(x) = x - x^2$. $\boxed{\frac{d^2x}{dT^2} = (1-2x)\frac{dT}{dT}}$ $\left(\begin{matrix}\text{NOT}\\ \frac{d^2F}{dT^2}\end{matrix}\right)$

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2. Page 24: $\boxed{P(m) \sim m^{-(1+\alpha)}}$ holds only for a range of high values of m (Not global).