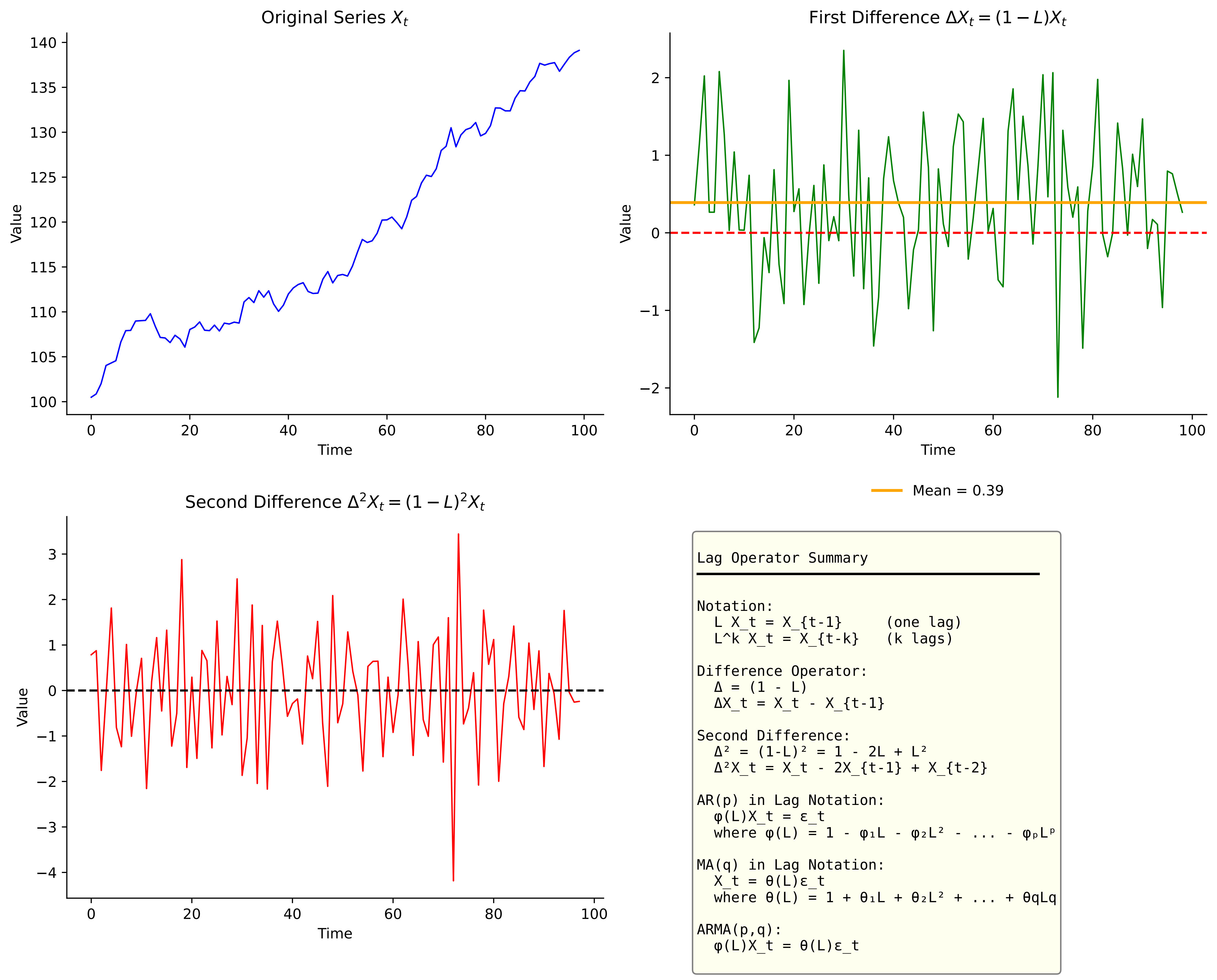

Original Series X_t
Value
Time
First Difference $\Delta X_t = (1 - L)X_t$
Value
Time
Mean = 0.39
Second Difference $\Delta^2 X_t = (1 - L)^2 X_t$
Value
Time
Lag Operator Summary
Notation:
L X_t = X_{t-1} (one lag)
L^k X_t = X_{t-k} (k lags)
Difference Operator:
Δ = (1 - L)
ΔX_t = X_t - X_{t-1}
Second Difference:
$\Delta^2 = (1-L)^2 = 1 - 2L + L^2$
$\Delta^2 X_t = X_t - 2X_{t-1} + X_{t-2}$
AR(p) in Lag Notation:
φ(L)X_t = ε_t
where $\varphi(L) = 1 - \varphi_1 L - \varphi_2 L^2 - ... - \varphi_p L^p$
MA(q) in Lag Notation:
X_t = θ(L)ε_t
where $\theta(L) = 1 + \theta_1 L + \theta_2 L^2 + ... + \theta q L q$
ARMA(p,q):
φ(L)X_t = θ(L)ε_t