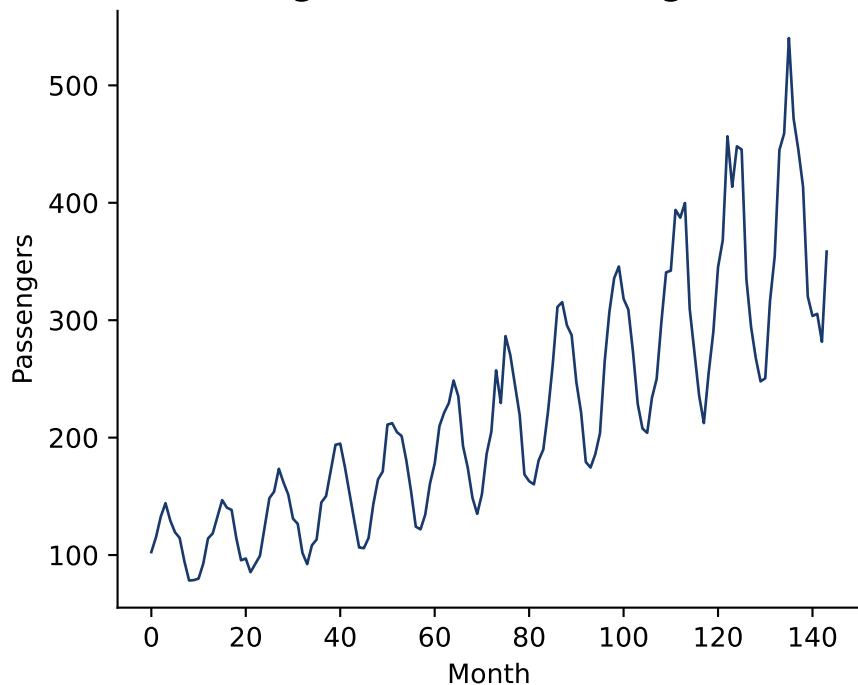
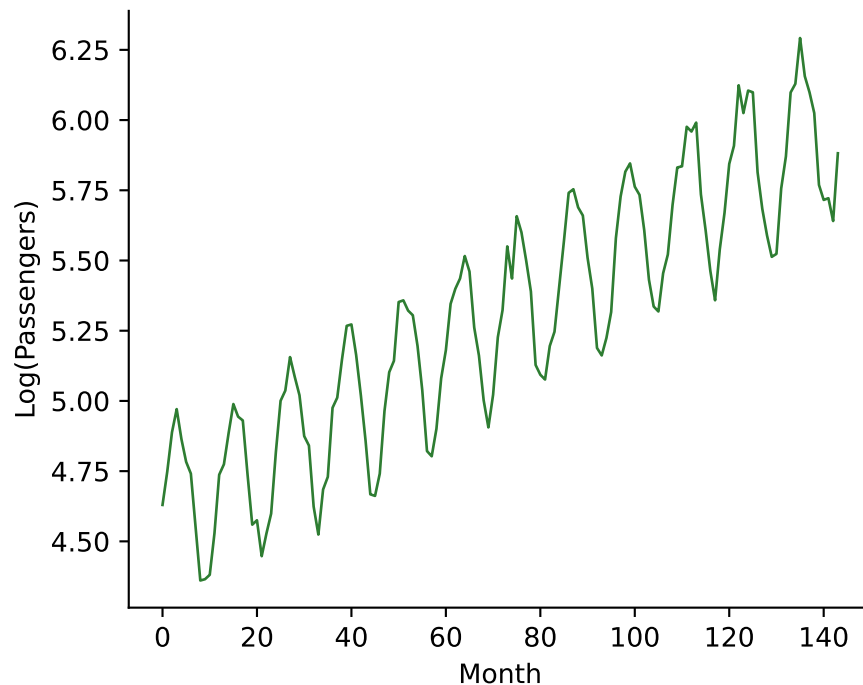


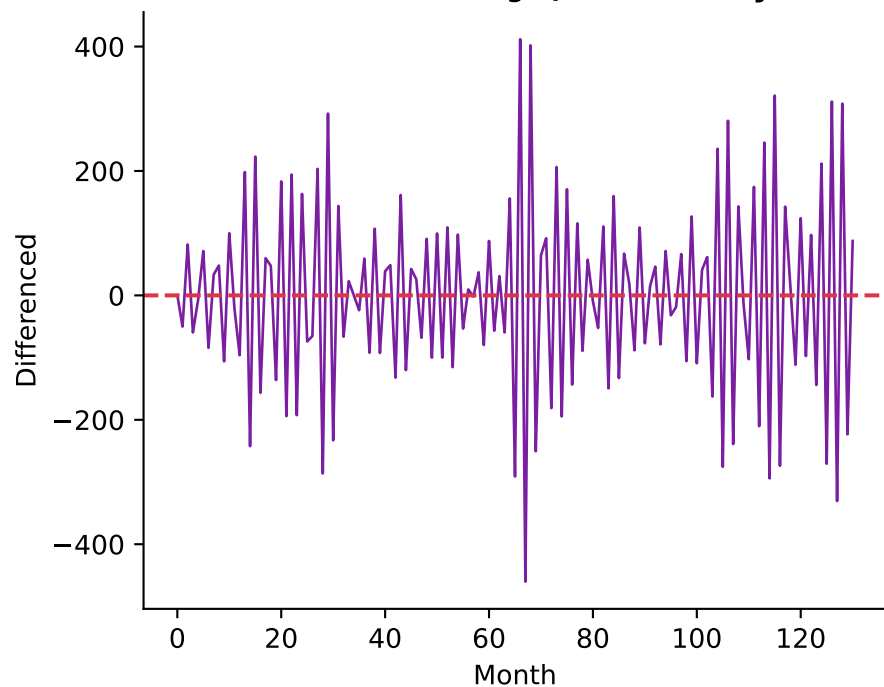
Original: Airline Passengers



Log Transform: $\log(Y_t)$



$(1 - L)(1 - L^{12})\log Y_t$: Stationary!



The Airline Model

$\text{SARIMA}(0, 1, 1) \times (0, 1, 1)_{12}$

$$(1 - L)(1 - L^{12})Y_t = (1 + \theta L)(1 + \Theta L^{12})\varepsilon_t$$

Only 2 parameters: θ and Θ

Why famous?

- Fits many seasonal economic series remarkably well
- Extremely parsimonious (just 2 parameters)
- Box & Jenkins (1970) airline passenger data