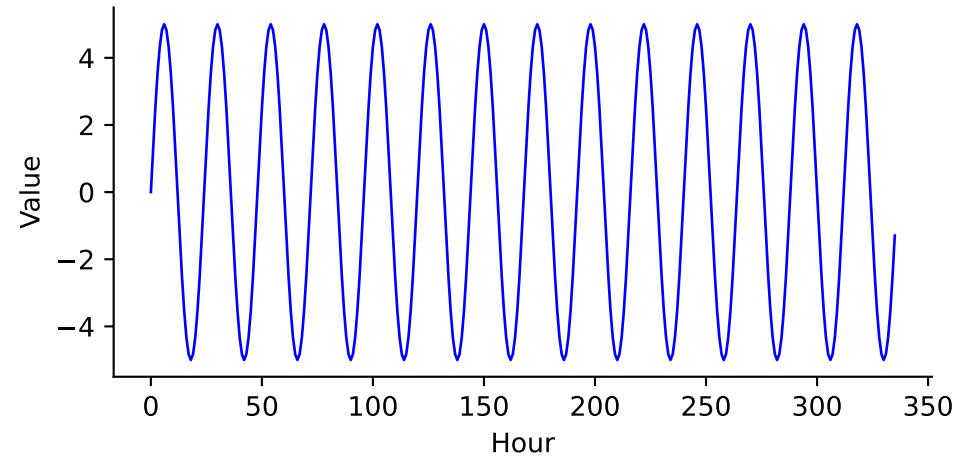
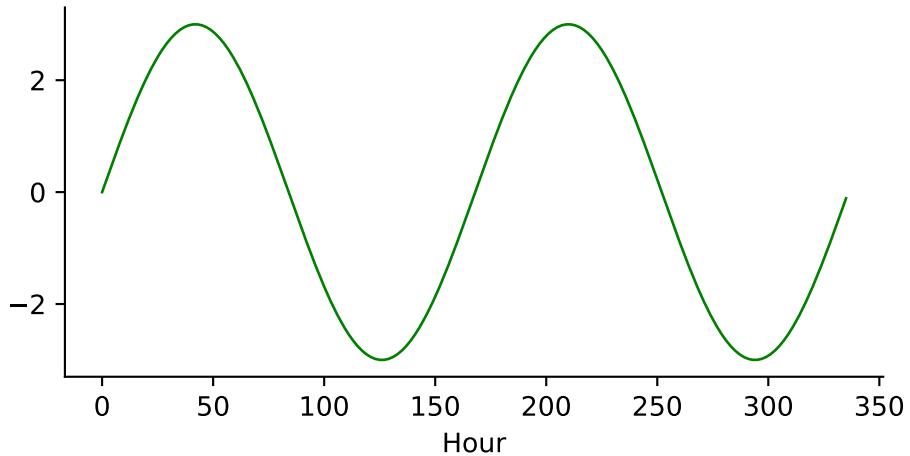


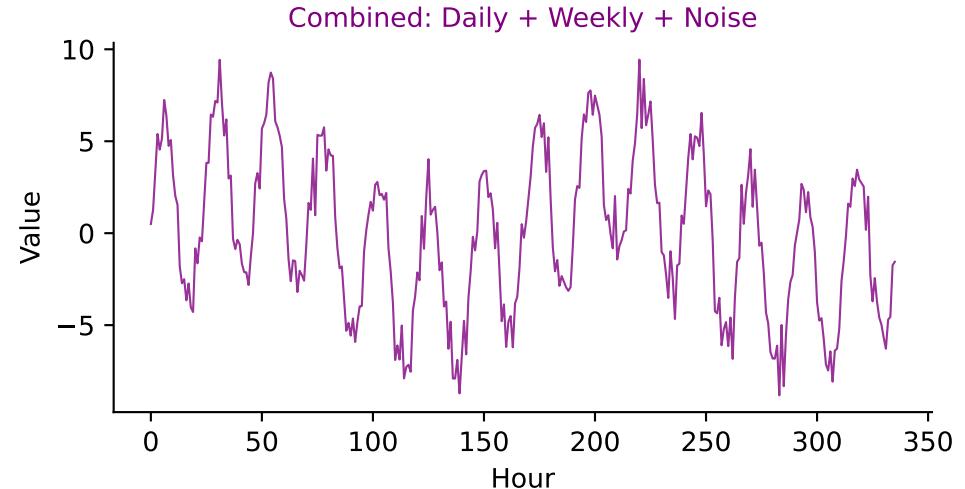
Daily Seasonality ( $s=24$ )



Weekly Seasonality ( $s=168$ )



Combined: Daily + Weekly + Noise



#### SARIMA Limitation:

SARIMA( $p, d, q$ )( $P, D, Q$ ) $_s$  handles only ONE seasonal period  $s$ .

For hourly data with:

- Daily pattern:  $s = 24$
- Weekly pattern:  $s = 168$

SARIMA cannot model both!

#### Solutions:

- TBATS
- Prophet
- Fourier terms + ARIMA