

Summary of properties of Autoregressive, Moving Average and Mixed ARMA Processes

	Autoregressive Processes	Moving Average Processes	Mixed Processes (ARMA)
Model in terms of past y's	$A(z^{-1})y_k = e_k$	$B(z^{-1})^{-1}y_k = e_k$	$B(z^{-1})^{-1}A(z^{-1})y_k = e_k$
Model in terms of past e's	$y_k = A(z^{-1})^{-1}e_k$	$y_k = B(z^{-1})e_k$	$y_k = B(z^{-1})A(z^{-1})^{-1}e_k$
Autocorrelation Function	Infinite (damped exponentials and/or damped sine waves) Tails off	Finite Cuts off after lag q	Infinite (damped exponentials and/or damped sine waves after first q-p lags) Tails off
Partial autocorrelation function	Finite Cuts off after lag p	Infinite (dominated by damped exponentials and/or sine waves) Tails off	Infinite (damped exponentials and/or damped sine waves after first p-q lags) Tails off