

Identificação de Modelos ARMA(p,q)

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Importando dados

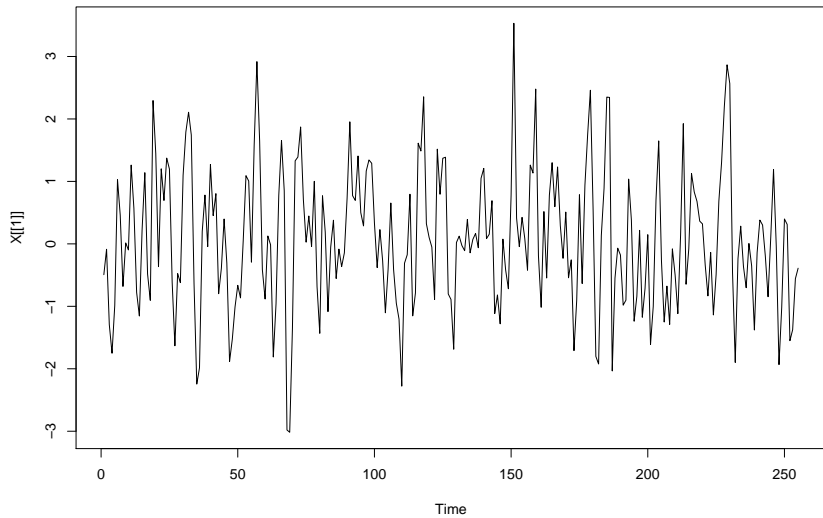
```
load('data/dados_arma_2.RData')
```

Metodologia

- ▶ Olhar para ACF e PACF segundo a tabela:

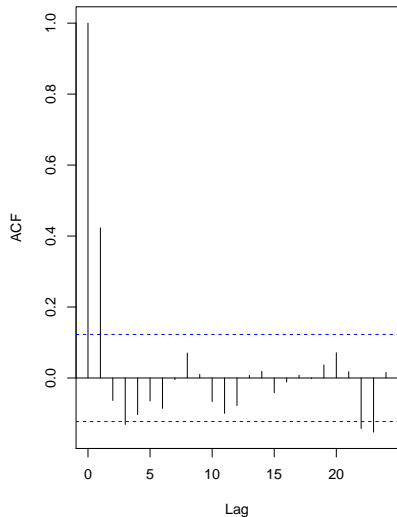
Modelo	ACF	PACF
AR(p)	Decai exp	Corte $> p$
MA(q)	Corte $> q$	Decai exp
ARMA(p, q)	Decai exp $> q - p$	Decai exp

Série 1

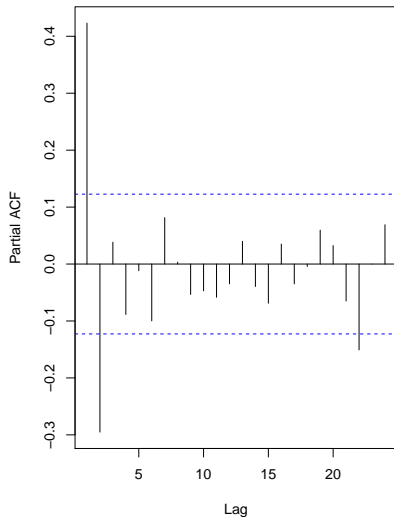


ACF e PACF

Series X[[1]]



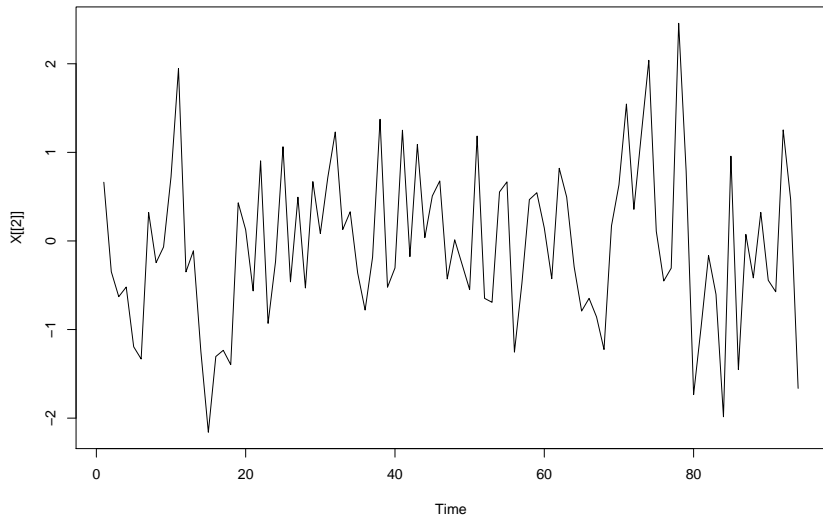
Series X[[1]]



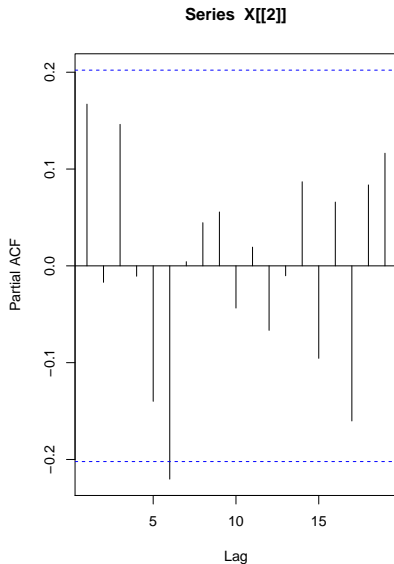
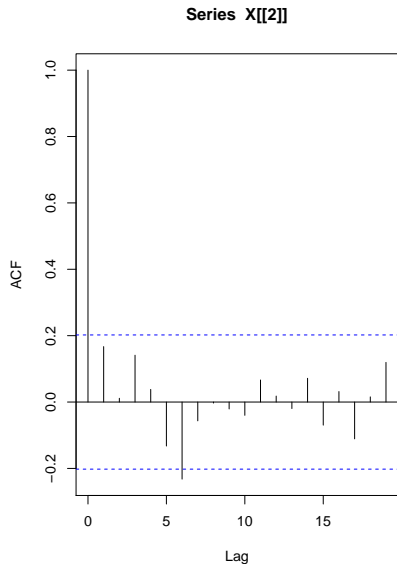
ARMA(1,2)

- ▶ Podemos observar que ambos os gráficos tem decaimento exponencial.
- ▶ Pela ACF, $q - p = 1$.
- ▶ Pelo gráfico, não podemos afirmar mais.
- ▶ Propomos $ARMA(1, 2)$

Série 2



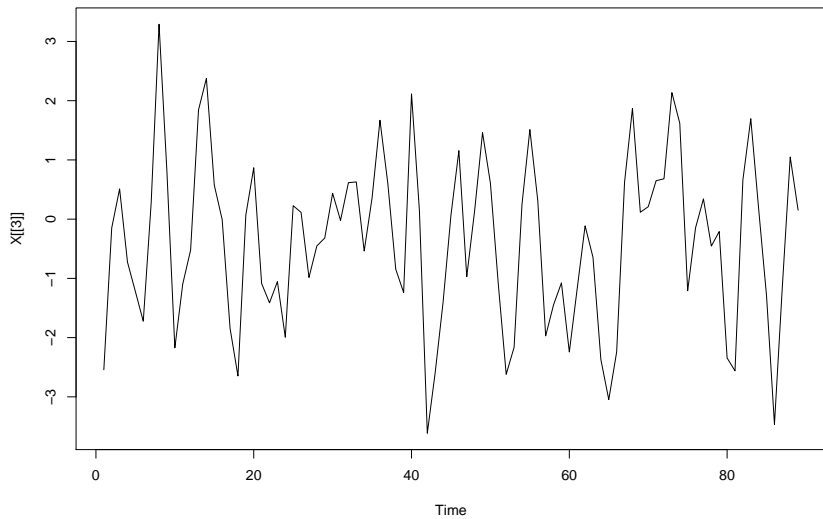
ACF e PACF



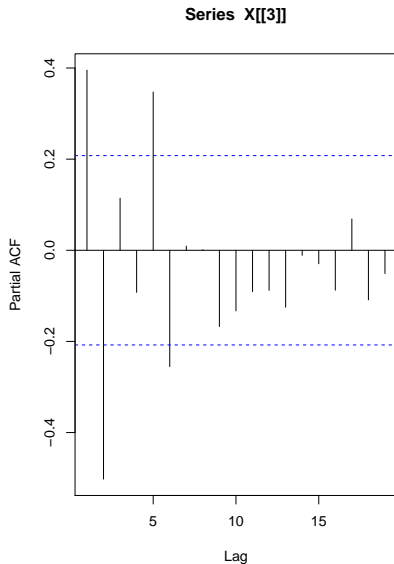
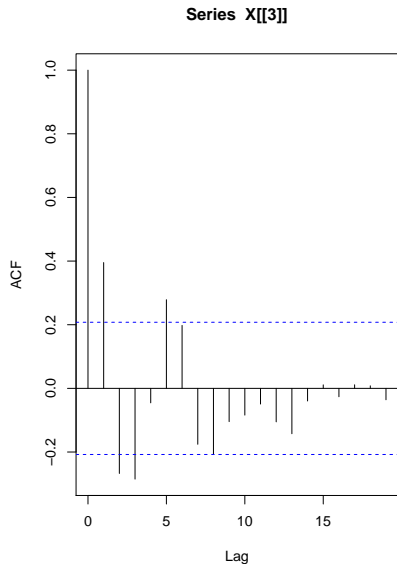
MA(0)

- ▶ Podemos observar que há um corte na ACF quando $q > 0$
- ▶ Propomos $MA(0)$

Série 3



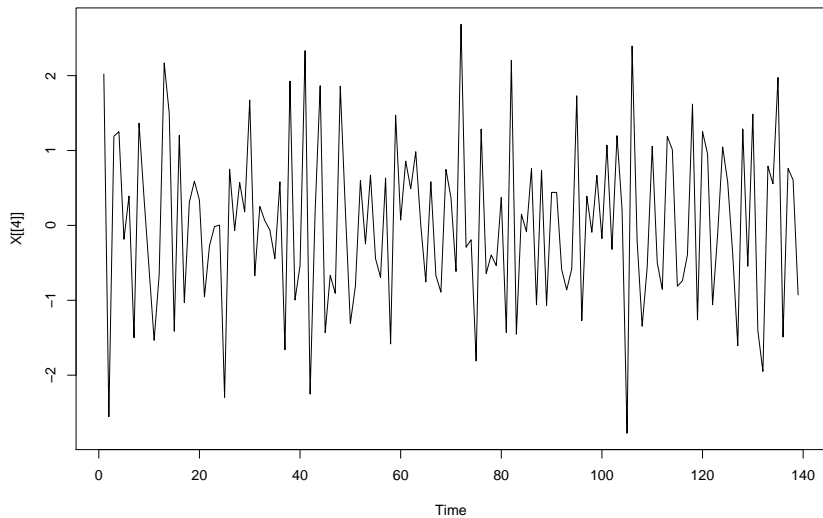
ACF e PACF



ARMA(1,2)

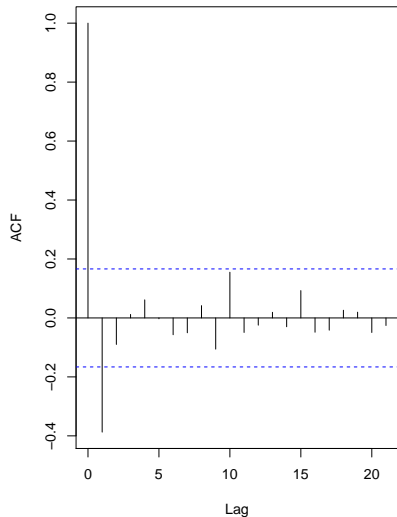
- ▶ Podemos observar que ambos os gráficos tem decaimento exponencial.
- ▶ Pela ACF, $q - p = 1$.
- ▶ Pelo gráfico, não podemos afirmar mais.
- ▶ Propomos $ARMA(1, 2)$

Série 4

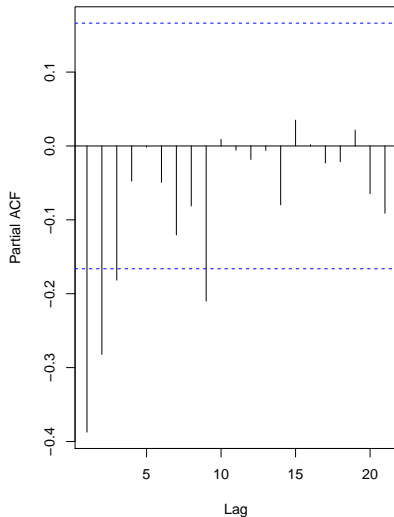


ACF e PACF

Series X[[4]]



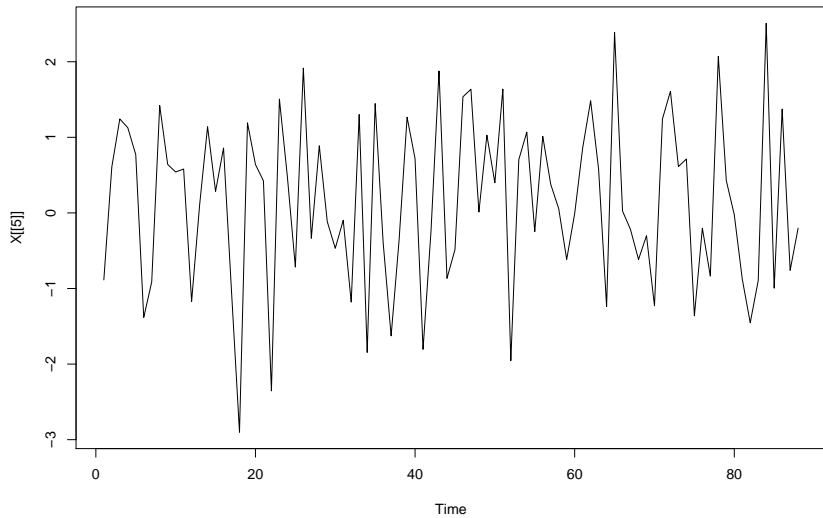
Series X[[4]]



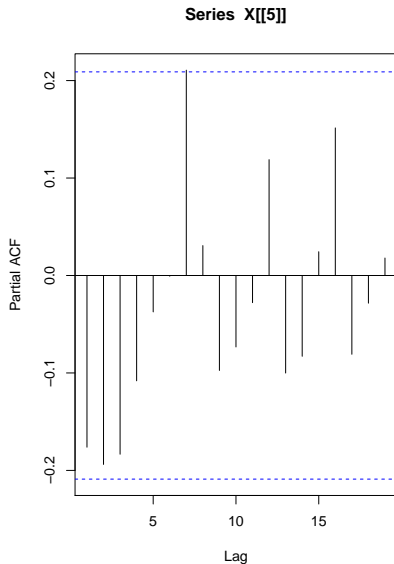
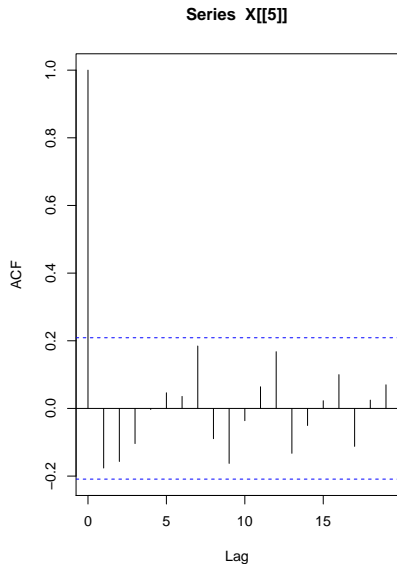
MA(1)

- ▶ Podemos observar que a PACF tem decaimento exponencial
- ▶ Pelo gráfico a ACF tem corte para $\text{lag} > 1$
- ▶ Propomos $MA(1)$

Série 5



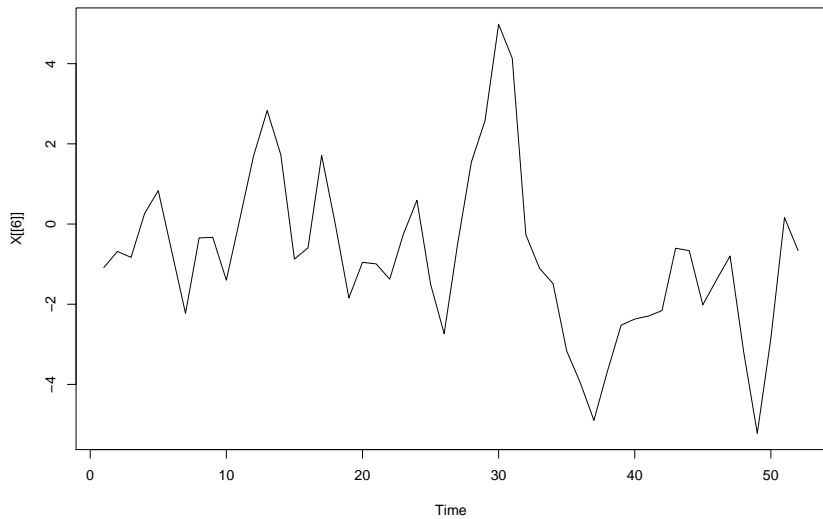
ACF e PACF



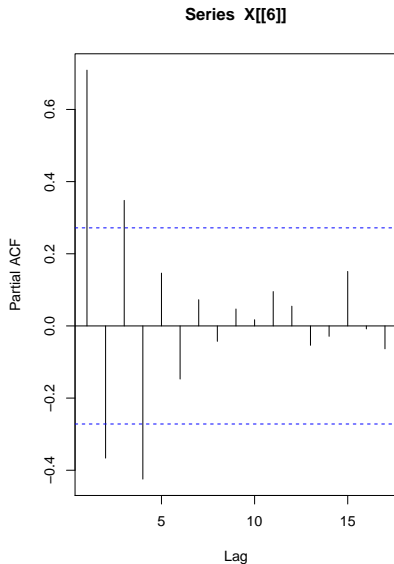
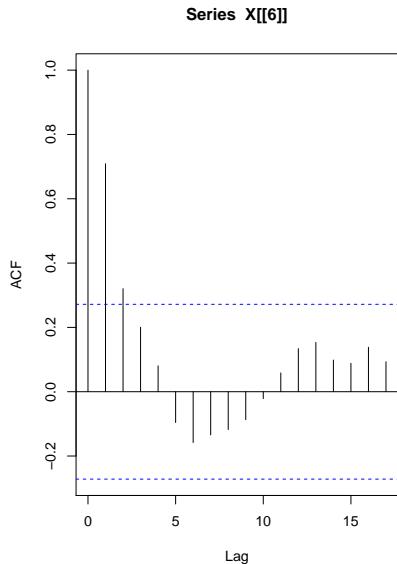
MA(0)

- ▶ Podemos observar que há um corte na ACF quando $q > 0$
- ▶ Propomos $MA(0)$

Série 6



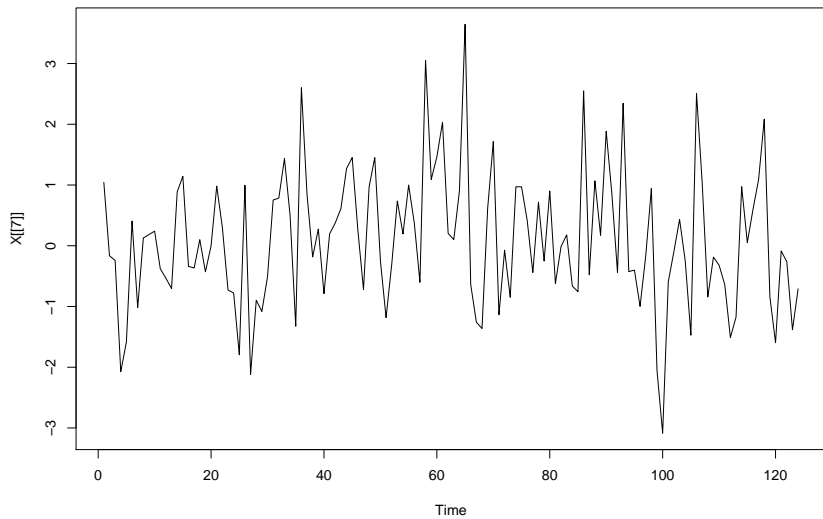
ACF e PACF



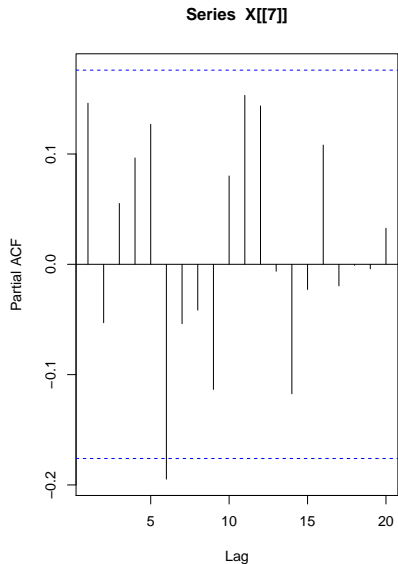
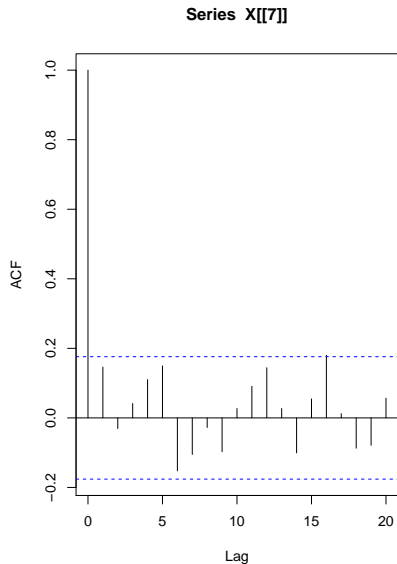
ARMA(1,1)

- ▶ Podemos observar que ambos os gráficos tem decaimento exponencial.
- ▶ Pela ACF, $q - p = 0$.
- ▶ Pelo gráfico, não podemos afirmar mais.
- ▶ Propomos $ARMA(1,1)$

Série 7



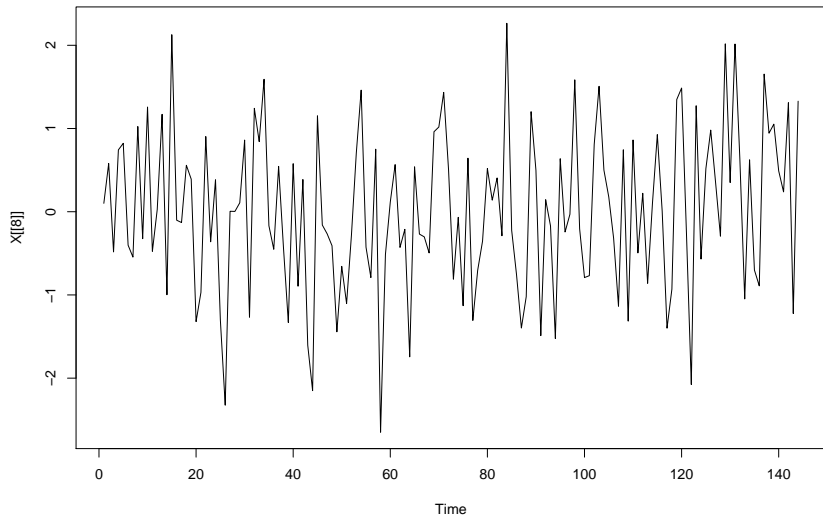
ACF e PACF



ARMA(1,1)

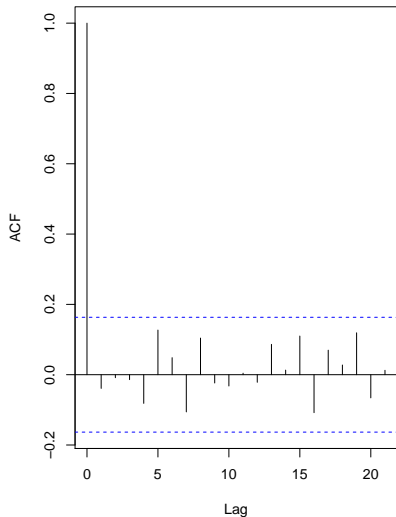
- ▶ Podemos observar que ambos os gráficos tem decaimento exponencial.
- ▶ Pela ACF, $q - p = 0$.
- ▶ Pelo gráfico, não podemos afirmar mais.
- ▶ Propomos $ARMA(1,1)$

Série 8

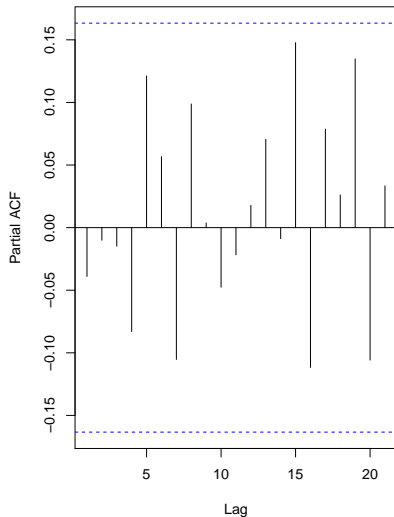


ACF e PACF

Series X[[8]]



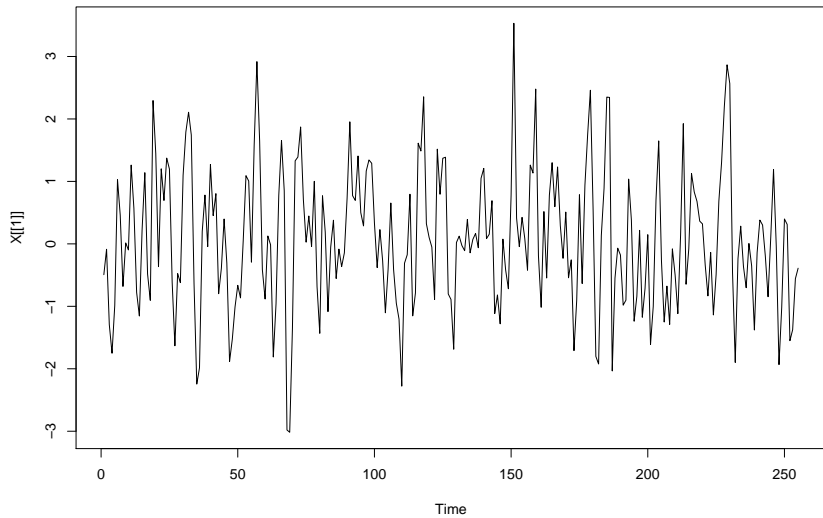
Series X[[8]]



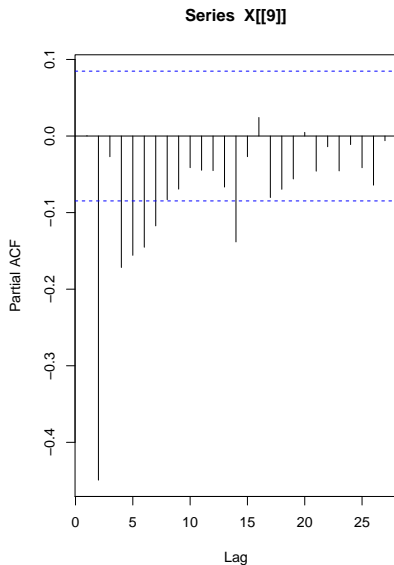
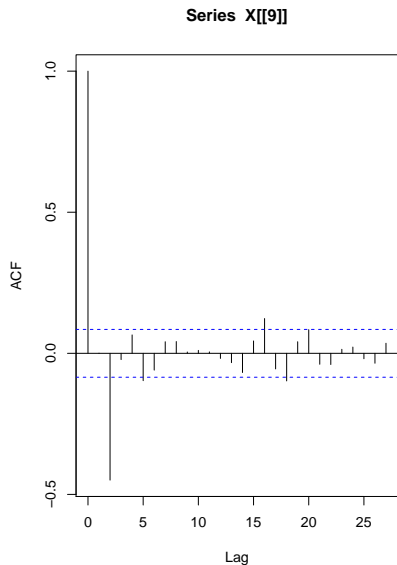
MA(0)

- ▶ Podemos observar que há um corte na ACF quando $q > 0$
- ▶ Propomos $MA(0)$

Série 9



ACF e PACF



MA(2)

- ▶ Podemos observar que há um corte na ACF quando $q > 2$
- ▶ A PACF tem decaimento exponencial
- ▶ Propomos $MA(2)$