

# Quiz 09

**Due** Jan 31, 2019 at 23:59      **Points** 10      **Questions** 6  
**Available** Jan 29, 2019 at 11:00 - Jan 31, 2019 at 23:59 3 days  
**Time Limit** 30 Minutes

## Instructions

Quiz 09 covers the material in lecture 23 (pages 167 - 171 of the Course Notes)

This quiz is no longer available as the course has been concluded.

## Attempt History

	Attempt	Time	Score
LATEST	<a href="#">Attempt 1</a>	10 minutes	6 out of 10

Score for this quiz: **6** out of 10  
Submitted Jan 31, 2019 at 16:50  
This attempt took 10 minutes.

Question 1

0 / 2 pts

We can remove a linear trend from a Non-stationary Time Series by ...

Correct Answer

You Answered

☐ using the differences between observations 4 time periods apart when the data is recorded quarterly

☐ using the differences between successive observations

☒ All other options are correct

☐ using the differences between observations 12 time periods apart when the data is recorded monthly

Question 2

2 / 2 pts

We can often remove a quarterly seasonal component from a Non-stationary Time Series by ...

- ☐ using the differences between observations 12 time periods apart
- ☐ using the differences between successive observations
- ☒ using the differences between observations 4 time periods apart
- ☐ All other options are correct

Correct!

Question 3

2 / 2 pts

We can often remove a monthly seasonal component from a Non-stationary Time Series by ...

- ☒ using the differences between observations 12 time periods apart
- ☐ using the differences between observations 4 time periods apart
- ☐ using the differences between successive observations
- ☐ All other options are correct

Correct!

Question 4

0 / 2 pts

If we had a weekly Time Series with observations taken every day, we could remove any "seasonal" component by ...

- ☐ using the differences between observations 7 time periods apart only if there was no trend in the series

- ☒ All other options are correct

You Answered

Correct Answer

☐

using the differences between observations 7 time periods apart if there was a linear trend

☐

using the differences between observations 7 time periods apart

Question 5

1 / 1 pts

If we had a monthly Time Series with a linear trend and a regularly repeating seasonal pattern, we could ...

☐

None of the other options are correct

☐

create a stationary series by differencing 1 time period apart

☒

create a stationary series by differencing both 1 time period apart and 12 time periods apart

☐

create a stationary series by differencing 12 time periods apart

Question 6

1 / 1 pts

When we are building SARIMA models of differences, the backshift operator "B" ...

☐

shifts our attention to the same month of the previous year when raised to the power of 12 ( $B^{12}$ )

☐

shifts our attention back 1 time period

☒

All other options are correct

☐

shifts our attention to the same quarter of the previous year when raised to the power of 4 ( $B^4$ )

Quiz Score: **6** out of 10