

**STA457H1/STA2202HF: Time Series Analysis**  
**Assignment 2 - Question 1** **Due data October 14, 2022**

Student Name.....ID number.....

**Instructions:** *Show your answers in details.*

**Q1 (1 points):** For the Box and Cox power transformations, use calculus to show that, for any fixed  $x > 0$ , as  $\lambda \rightarrow 0$ ,  $(x^\lambda - 1)/\lambda \rightarrow \log(x)$ .