STAC58: 2015 Assignment 3

1. Suppose that $X = (X_{ij}) \in \mathbb{R}^{m \times n}$ and X_{ij} is a random variable s.t. $E(X_{ij}) \in \mathbb{R}$ $\forall i,j$. Then for $A \in \mathbb{R}^{p \times m}$, $B \in \mathbb{R}^{n \times q}$ and $C \in \mathbb{R}^{p \times q}$ prove that $E(AXB + C) = AE(X)B + C$.

2. 6.2.19

3. 6.3,30

4. 6.5.17

5. 8.1.12

6. 8.1.16

7. 8.1.21