

Name: _____ Student Number: _____

Department: _____ Signature: _____

Question 1.[5 points] Find the interval of convergence and radius of convergence for

$$\sum_{n=1}^{\infty} \frac{(5x - 4)^n}{n^3}$$

Question 2.[5 points] Determine whether the given series convergent or divergent. Explain your answer.

$$\sum_{n=2}^{\infty} \frac{n! + (n - 2)!}{(n + 1)! + (n - 1)!}$$

[Hint: Ratio Test is inconclusive for this question.]