

King Fahd University of Petroleum and Minerals
Quiz 3 Math 102-092

Name:

ID:

Section:

Q 1) Test the series for convergence or divergence. (Justify your answer)

a) $\sum_{n=1}^{\infty} \tan\left(\frac{1}{n}\right)$ b) $\sum_{n=1}^{\infty} \frac{1}{n + n \cos^2 n}$ c) $\sum_{n=1}^{\infty} [\ln(2n-1) - \ln(5n+1)]$ d) $\sum_{n=2}^{\infty} \frac{1}{n\sqrt{\ln n}}$

Q 2) Determine whether the series $\sum_{n=1}^{\infty} \frac{2^n + (-4)^n}{8^n}$ is convergent or divergent. If it is convergent, find its sum.

solution