King Fahd University of Petroleum and Minerals
Departement of Mathematics & Statistics
Math102.14
Semester 111
Quiz (4)

Name:
ID #: **Serial #:**

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1. Determine whether the ***sequence*** converges or diverges. If it converges, find its limit.

(a) $a_n = \dfrac{\sin n}{n}$

(b) $a_n = \dfrac{n}{\ln n}$

2. Find the sum of

$$\sum_{n=1}^{\infty} \frac{2^{2n+1}}{5^n}$$

3. Determine whether the ***series*** converges or diverges.

(a) $\sum_{n=1}^{\infty} \sqrt{\frac{n-1}{n}}$

(b) $\sum_{n=1}^{\infty} \frac{1}{n\left(\ln n\right)^2}$

4. Determine whether the ***sequence*** converges or diverges.

$$a_n = \left(1+\frac{3}{n}\right)^{4n}$$

Good luck
Khaled Al-Anezy