

King Fahd University of Petroleum & Minerals
Department of Mathematical Sciences
MATH - 102 Semester 092 **Quiz - 3**

Name: _____ ID#: _____

Section#: _____

1 Express the repeating decimal $0.215\overline{15}$ as a geometric series, and write its sum as the ratio of two integers.

2 Determine the convergence or divergence of the following series:

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

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

3.
$$\sum_{n=1}^{\infty} \frac{n}{e^{n^2}}$$

4.
$$\sum_{n=1}^{\infty} \pi^{1-7n}$$