Bilkent University

Name & Lastname: ....

Department: .... Student ID: ....

Q-1)

(a) Does the series $\displaystyle\sum_{n=1}^{\infty} \frac{1}{n^{1/n}}$ converge or diverge? If it converges find its sum.

(b) Does the series $\displaystyle\sum_{n=2}^{\infty} \frac{1}{n^2 - 1}$ converge or diverge? If it converges find its sum.

(c) Does the sequence $\displaystyle\left(\frac{n}{n+1} \right)^n$ converge or diverge? If it converges find its limit.

Show your work in detail. Correct answers with no justification will not get any credit.

Grading: 2+5+3=10 points

Solution: (Grader: `melis.gezer@bilkent.edu.tr`)