

King Fahd University of Petroleum and Minerals  
Department of Mathematics & Statistics  
Math102.27      Spring 2012 (112)      Quiz (4)

---

---

Name: \_\_\_\_\_

ID #: \_\_\_\_\_                      Serial#: \_\_\_\_\_

---

---

1. Determine whether the following *series* converge or diverge.

(a) 
$$\sum_{n=1}^{\infty} \frac{1}{n + n \cos^2 n}$$

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

$$(c) \sum_{n=2}^{\infty} \frac{n^2}{\ln n}$$

2. Find the exact sum of the series

$$\sum_{n=1}^{\infty} (-1)^n \frac{3^{n-1}}{2^{2n+3}}$$

**Good luck**  
**Khaled Al-Anezy**