Math 102
Spring 2014, Term 132

Quiz 5 Section 16

**Instructions:** Show Your Work!

Which of the following series converge absolutely, which converge, and which diverge? Give reasons for your answers.

(a)

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

(b)

$$\sum_{n=1}^{\infty} \left(1 + \frac{1}{n}\right)^n$$

(c)

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

(d)

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