

MATH 166
SUMMER 2012
QUIZ 18

1. Determine if the following series converge. If the series converges, find its sum.

a) $\sum_{n=1}^{\infty} \ln\left(\sqrt{\frac{n}{n+1}}\right)$ b) $\sum_{n=0}^{\infty} \frac{6^{n+2}8^{n-2}}{7^{2n}}$ c) $\sum_{n=1}^{\infty} (\sqrt[n]{2} - \sqrt[n+1]{2})$

2. (5 pt) Does the infinite series

$$\sum_{n=20}^{\infty} \frac{1}{n \ln(n) \ln(\ln(n))}$$

converge or diverge?