## Advanced Calculus: 15-Minute Quiz 05

Name : \_\_\_\_\_ Student ID # : \_\_\_\_ Score : \_\_\_\_

1. Find the sum of the series  $\sum_{n=1}^{\infty} \frac{1}{n(n+1)(n+2)}.$ 

2. Does the series  $\sum_{n} \sqrt{a_n a_{n+1}}$  converge, if  $\sum_{n} a_n$  converges and  $a_n \ge 0$ ?

3. For which p, does the series  $\sum_{n} \frac{1}{(\log n)^p}$  converge?