

Instructions: Show Your Work!

1. Determine whether the following series are convergent or divergent. If convergent, find the sum (if possible).

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

2. Determine whether the following series are convergent or divergent. If convergent, find the sum (if possible).

$$\sum_{n=1}^{\infty} \frac{3^n + 2^n}{6^n}.$$

3. Use the integral test to determine whether the following series are convergent or divergent. If convergent, find the sum (if possible).

$$\sum_{n=2}^{\infty} \frac{1}{n \ln n}.$$

Instructions: Show Your Work!

1. Determine whether the following series are convergent or divergent. If convergent, find the sum (if possible).

$$\sum_{n=1}^{\infty} \frac{\sqrt{2n}}{1 + \sqrt{n}}.$$

2. Determine whether the following series are convergent or divergent. If convergent, find the sum (if possible).

$$\sum_{n=1}^{\infty} \frac{3^n + 4^n}{12^n}.$$

3. Use the integral test to determine whether the following series are convergent or divergent. If convergent, find the sum (if possible).

$$\sum_{n=2}^{\infty} \frac{1}{n \ln n}.$$