

Taking a Test Run

In each problem, use the Integral Test or the Comparison Test to determine whether the series converges or diverges. *Be sure to verify the conditions of whichever test you use, so that you know it applies. Write that work down.*

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

2.
$$\sum_{n=1}^{\infty} \frac{10^n + 1}{9^n}$$

3.
$$\sum_{n=1}^{\infty} \frac{1}{e^n}$$

4.
$$\sum_{k=1}^{\infty} \frac{\ln k}{k}$$