Determine the convergence or divergence of the series and identify the test that was used.

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

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

3. $\sum_{n=1}^{\infty} \frac{2}{\sqrt[4]{n^3}}$

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

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

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

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

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

9. $\sum_{n=1}^{\infty} \frac{1}{n^{1.04}}$

10. $\sum_{n=1}^{\infty} \frac{n^{k-1}}{n^k + 1}, k > 2$

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

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

13. $\sum_{n=1}^{\infty} \frac{1}{n^{\pi}}$

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

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

16. $\sum_{n=1}^{\infty} \frac{n+3}{n\left(n+2\right)}$

17. $\sum_{n=0}^{\infty} \frac{1}{n!}$