1.   Use the comparison test or the limit comparison test to determine whether the series converges:

$$\sum_{k=2}^{\infty} \sqrt{\frac{k}{k^3 - 1}}$$

1. Use the comparison test or the limit comparison test to determine whether the series converges:

$$\sum_{k=2}^{\infty} \frac{k}{\sqrt{k^5 + 1}}$$