

1. Show that $\left\{\frac{4n-1}{2n+1}\right\}$ converges to 2.

2. Show that $\left\{\frac{2}{3^n+1}\right\}$ converges to 0.

3. Show that $\left\{2 + \frac{5}{n} + \frac{1}{n^2} + \frac{10}{n^3}\right\}$ converges to 2.