Show all steps, giving appropriate justifications.

1. Does the sequence \( \{ \ln(7k + 5) - \ln(3k + 2) \}_{k=1}^{\infty} \) converge? If so, find its limit. If not, explain why not.

2. Does the series \( \sum_{k=1}^{\infty} (\sqrt[3]{k} - \sqrt[k+1]{k}) \) converge? If so, evaluate it. If not, explain why not.

3. Does the series \( \sum_{k=1}^{\infty} \frac{(2k)!}{(k!)^2} \) converge? Explain why or why not.