

Induction proofs for series:

1. Prove that  $2 + 5 + 8 + \dots + (3n - 1) = \frac{3n^2 + n}{2}$

2. Prove that  $4 + 16 + 64 + \dots + 4^n = 4 \cdot \frac{4^n - 1}{3}$