For each of these series, determine whether each converges or diverges. For each that converges, give the number to which it converges.

1. \[ \sum_{k=1}^{\infty} \frac{6k}{3k + 2} \]

2. \[ \sum_{k=0}^{\infty} \left( \frac{2}{3} \right)^k \]

3. \[ \sum_{k=0}^{\infty} 4 \left( \frac{1}{3} \right)^k \]