

$$\begin{aligned} a) \quad \sum_1^n \frac{k+3}{k} &= \sum_1^n \left( 1 + \frac{3}{k} \right) \\ &= \sum_1^n 1 + \sum_1^n \frac{3}{k} \\ &= n + 3 \sum_1^n \left( \frac{1}{k} \right) \\ &= \underline{\underline{n + 3x}} \end{aligned}$$