## Hwk 1: Math Review

Due in class on Wednesday $1 / 7$
Let $a_{1}, a_{2}, a_{3}, \ldots$ be a sequence of numbers and assume that $a_{1}=1$.

1) If $a_{n+1}=1.03 a_{n}$ for all $n \geq 1$, then what is $\sum_{i=1}^{30} a_{i}$ ?
2) If $a_{n+1}=\frac{a_{n}}{1.03}$ for all $n \geq 1$, then what is $\sum_{i=1}^{\infty} a_{i}$ ?
3) If $a_{n+1}=1.03 a_{n}-0.05$ for all $n \geq 1$, then what is $a_{30}$ ?
