Hints for exercises in chapter 13

Exercise 13.7.3(d). If $x = 10^K - 1$, then the integers in S_a that are $\leq x$ are the union of the sets $\{a \cdot 10^k \leq n < (a+1) \cdot 10^k\}$ for $k = 0, 1, 2, \ldots, K - 1$.

Exercise 13.7.4 One way is to factor the numerator and denominator and note that $(m+1)^2 - (m+1) + 1 = m^2 + m + 1$.