

$$\begin{aligned} 11^6 &= 1 \times 10^6 + 6 \times 10^5 + 15 \times 10^4 + 20 \times 10^3 + 15 \times 10^2 + 6 \\ &= 1000000 + 600000 + 150000 + 20000 + 1500 + 6 + 1 \\ &= 1771561 \end{aligned}$$