The code length for arithmetic coding

- ▶ Given m bits of binary expansion we assume the rest are all zero.
- ▶ Distance between two m bit expansions is 2^{-m}
- ▶ If $l_T - u_T \geq 2^{-m}$ then there must be a point x described by m expansion bits such that $l_T \leq x < u_T$