

Expected code length

- ▶ Fix the message length T
- ▶ Suppose the message is **generated** at random according to the distribution $p(c_1, \dots, c_T)$
- ▶ Then the expected code length is

$$\sum_{c_1, \dots, c_T} p(c_1, \dots, c_T) [-\log_2 p(c_1, \dots, c_T)]$$