$$x^* := \arg\max_{x \in [0,1]} x \log_2(x)$$

$$\lceil x \rceil, \left\lceil \frac{5}{3} \right\rceil$$

$$\mathbb{E}\left[\sum_{i=1}^{N} X_i\right] = \mathbb{E}\left[\mathbb{E}\left[\sum_{i=1}^{N} x_i \;\middle|\; N\right]\right]$$