Round robin exploration

- **Algorithm:** Uniformly toss the coins in a round robin manner
- **For every arm** a **,** $\mathbb{E}[N_a(T)] = \frac{T}{K}$
- $\mathrm{Reg}_T = \frac{T}{K} \sum_{a \neq a^\star} \Delta_a$ is **linear !**

Purely greedy exploitation

- **Algorithm:** Toss the coin having the maximum empirical reward
- **Consider two coins:**
  - **Coin 1** with probability of head **0.4**
  - **Coin 2** with probability of head **0.6**
- **With probability 0.24, Coin 1** gives head and **Coin 2** gives tail in the first toss
- **The algorithm then sticks to the sub-optimal Coin 1**
- **Overall regret is atleast** $0.048 \times T$ **which is linear !!**