

Metropolis-Hastings

For $k = 1, 2, \dots$

- Sample x' from a **wrong** $Q(x^k \rightarrow x')$
- Accept proposal x' with probability $A(x^k \rightarrow x')$
- Otherwise stay at x^k

$$x^{k+1} = x^k$$

$$T(x \rightarrow x') = Q(x \rightarrow x')A(x \rightarrow x') \quad \text{for all } x \neq x'$$

$$T(x' \rightarrow x) = Q(x' \rightarrow x)$$

How to choose A:

$$\pi(x)T(x \rightarrow x') = \pi(x')T(x' \rightarrow x)$$