Metropolis-Hastings

For k = 1, 2, …

- 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

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

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

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

How to choose A:

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