Given an unstable linear scalar differential equation $\dot{x}(t)=\alpha x(t)$ ($\alpha>0$), we will show that the discrete-time stochastic feedback control $\sigma x([t/\tau]\tau)dB(t)$ can stabilize it. That is, we will show that the stochastically controlled system $dx(t)=\alpha x(t)dt+\sigma x([t/\tau]\tau)dB(t)$ is almost surely exponentially stable when $\sigma^2>2\alpha$ and $\tau>0$ is sufficiently small, where $B(t)$ is a Brownian motion and $[t/\tau]$ is the integer part of t/τ. We will also discuss the nonlinear stabilization problem by a discrete-time stochastic feedback control. The reason why we consider the discrete-time stochastic feedback control is because that the state of the given system is in fact observed only at discrete times, say $0,\tau,2\tau,\cdots$, for example, where $\tau>0$ is the duration between two consecutive observations. Accordingly, the stochastic feedback control should be designed based on these discrete-time observations, namely the stochastic feedback control should be of the form $\sigma x([t/\tau]\tau)dB(t)$. From the point of control cost, it is cheaper if one only needs to observe the state less frequently. It is therefore useful to give a bound on τ from below as larger as better.