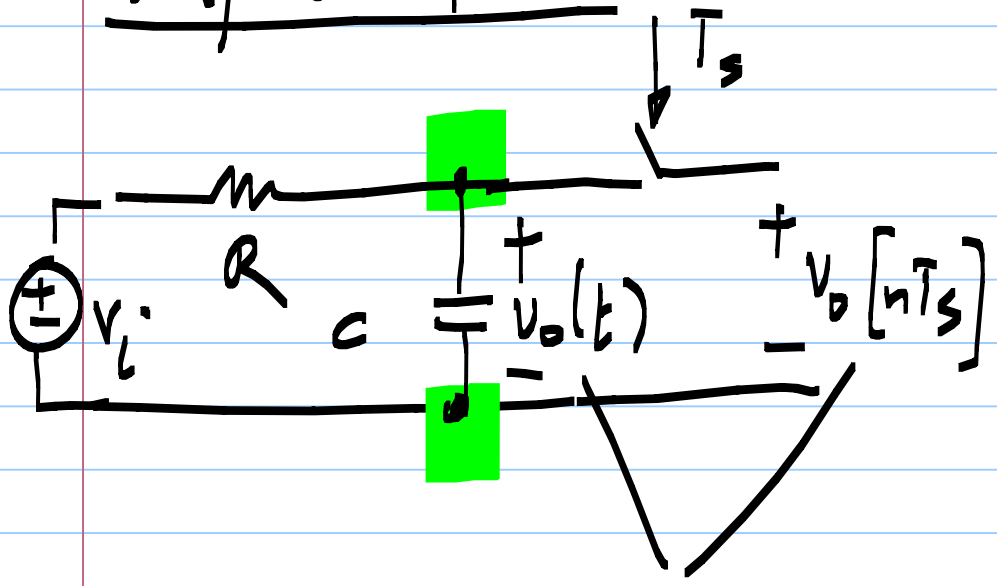
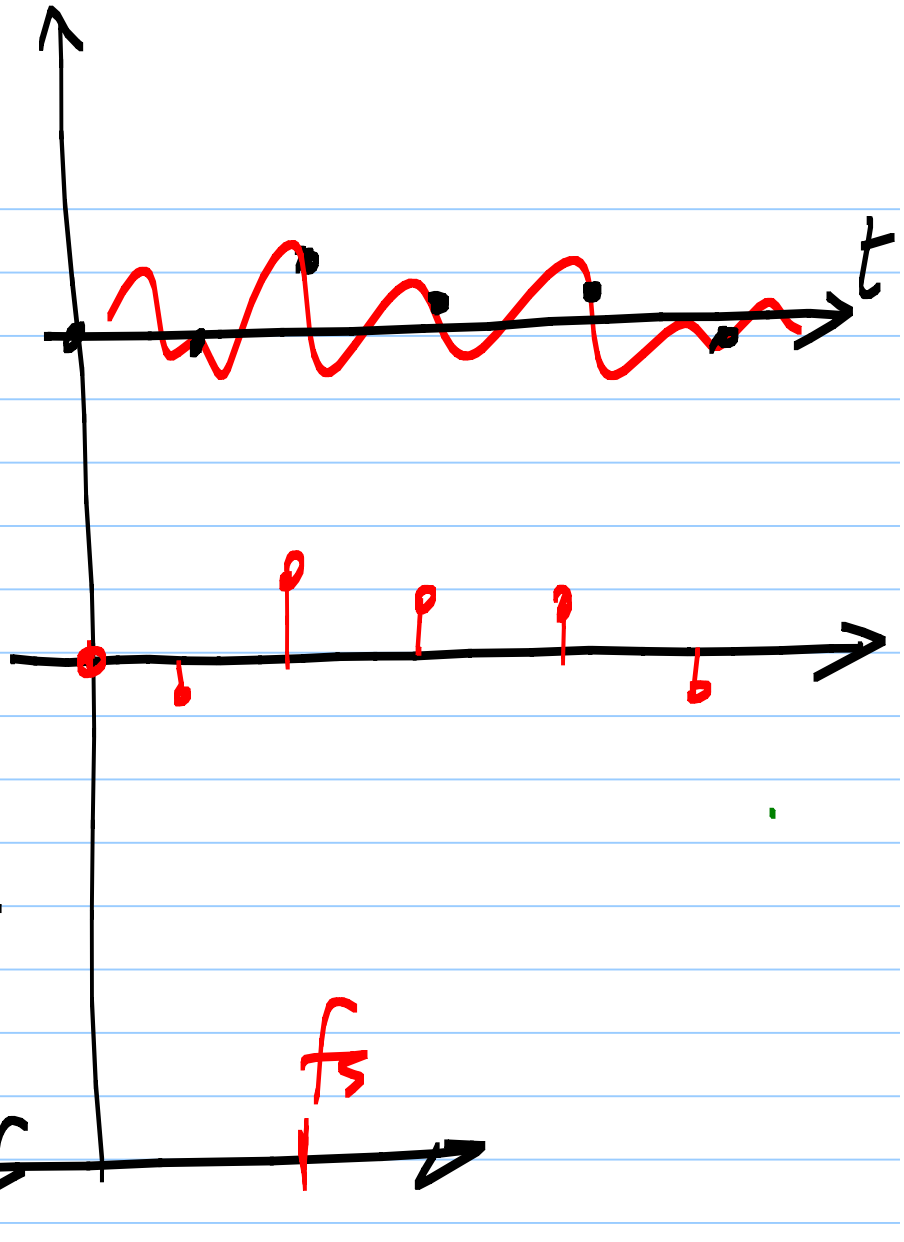
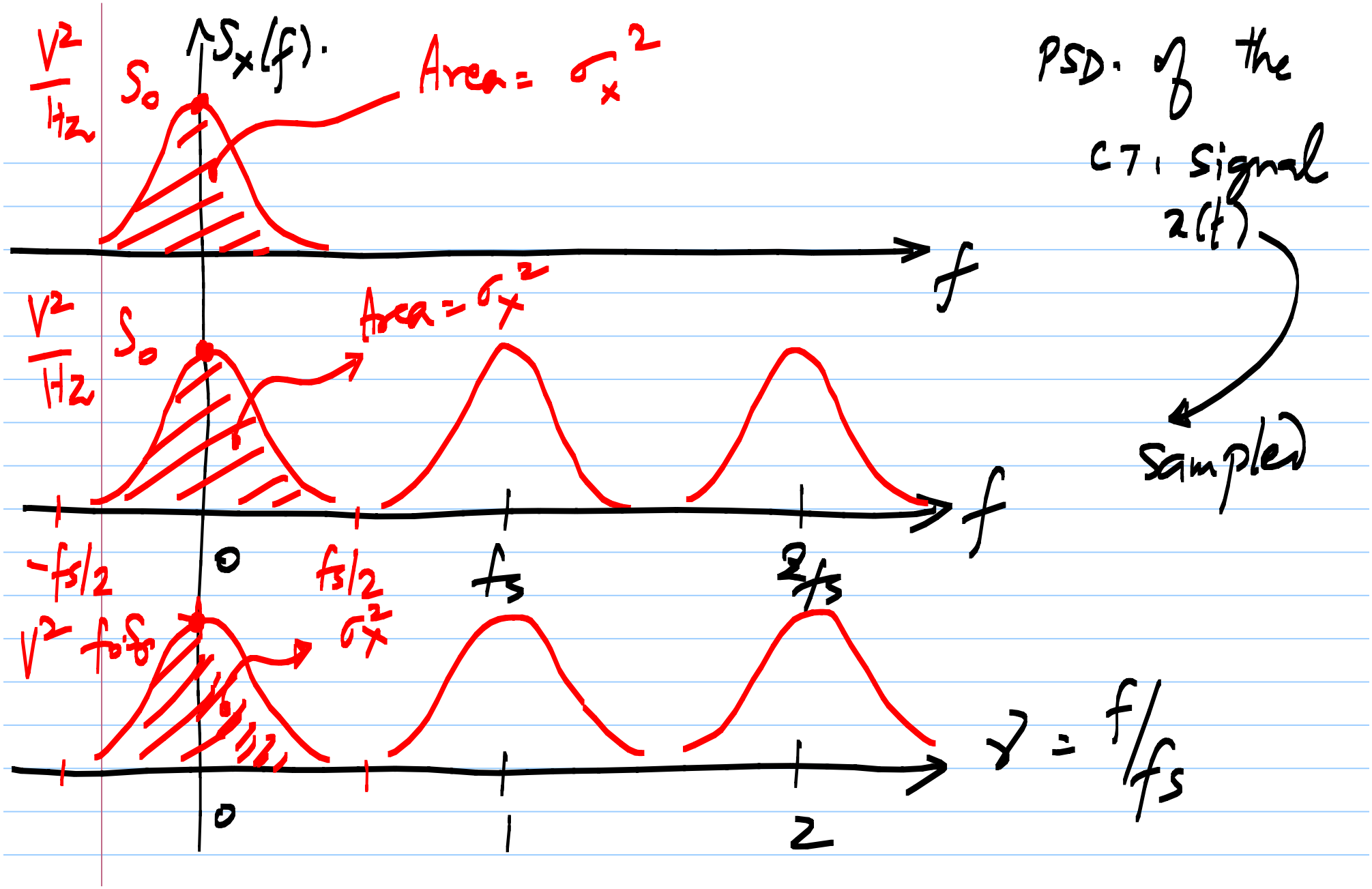
Sampled noise :



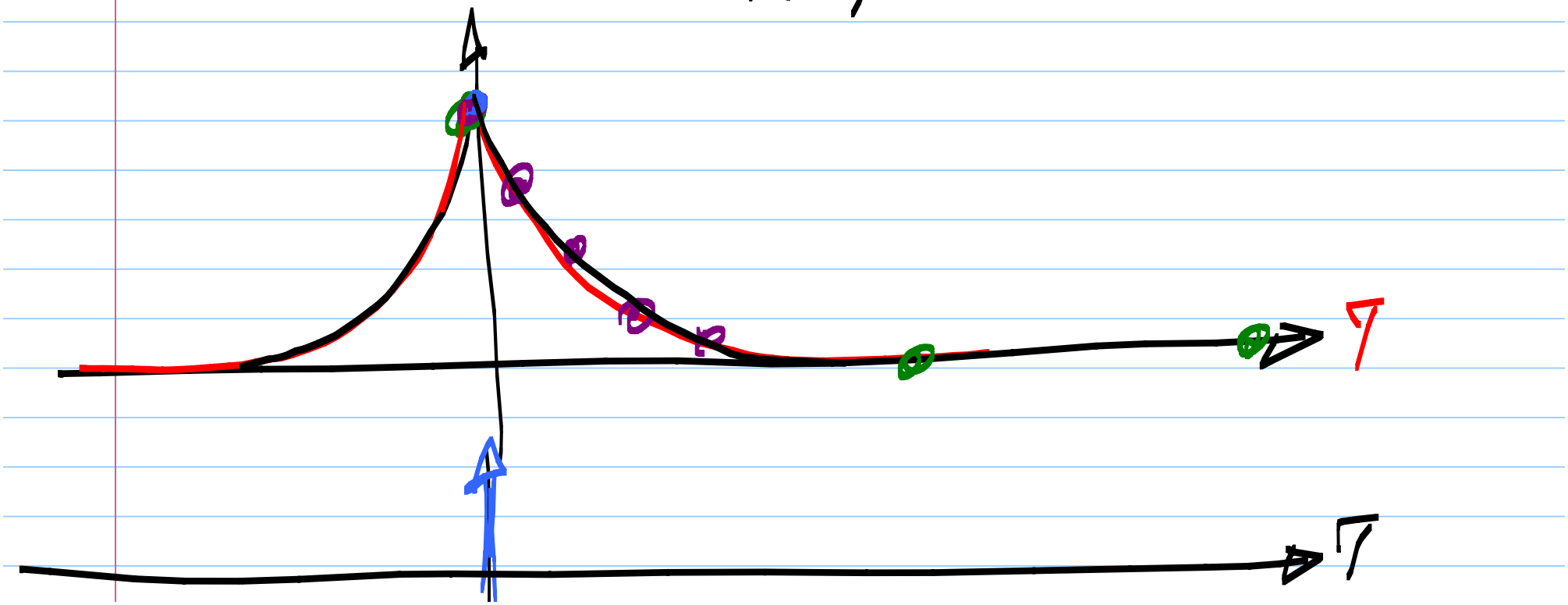
Same variance

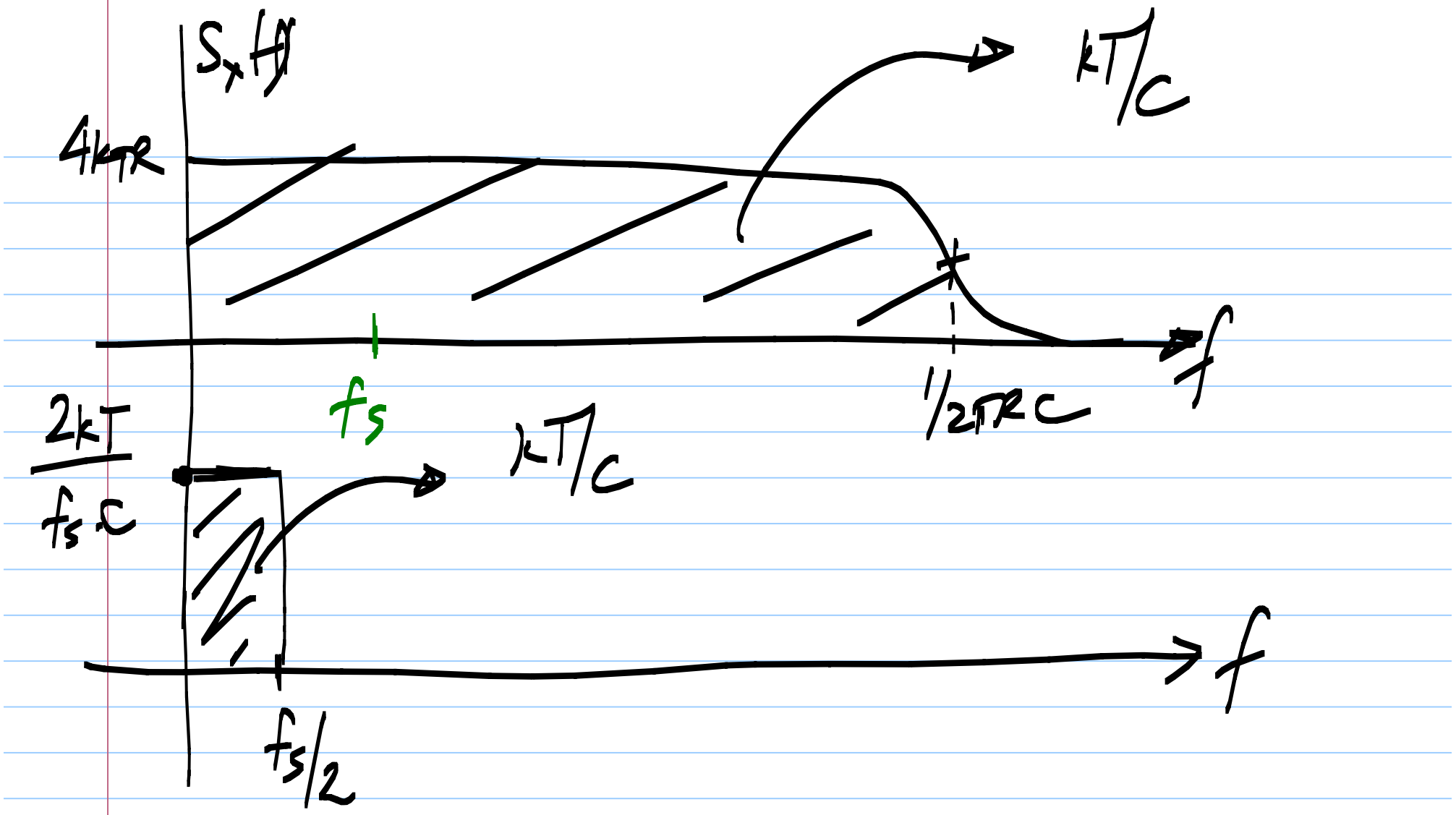


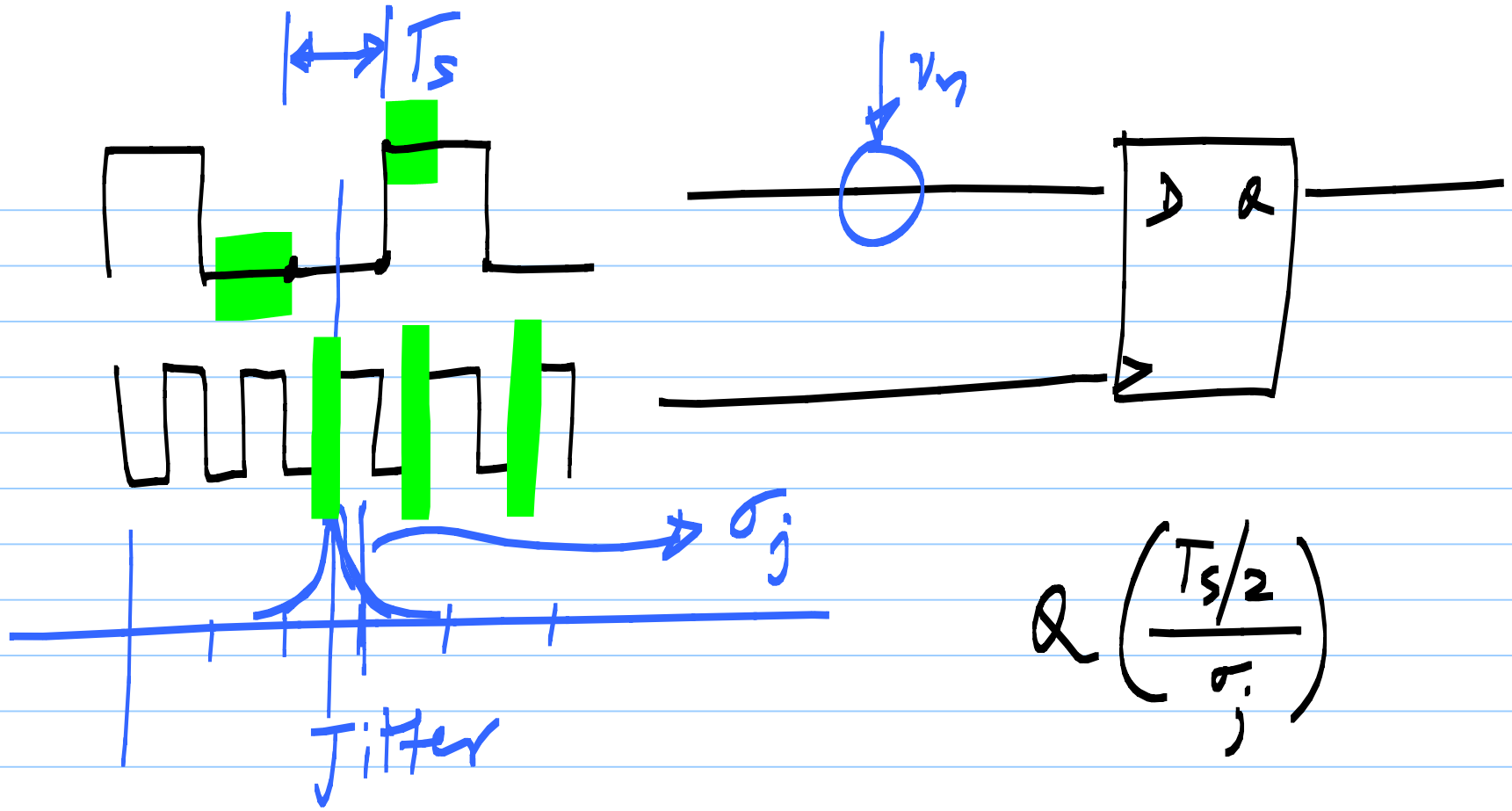

PSD. of the
CT signal
x(t)
sampled
$S_x(f)$
V^2/Hz
S_0
Area = σ_x^2
f
V^2/Hz
S_0
Area = σ_x^2
f
$-f_s/2$
0
$f_s/2$
f_s
$2f_s$
V^2 $f_0 f_s$
σ_x^2
$\gamma = f/f_s$
0
1
2

2-sided spectral density: $\dfrac{2kTR}{1+(2\pi fCR)^2} = S_x(f)$

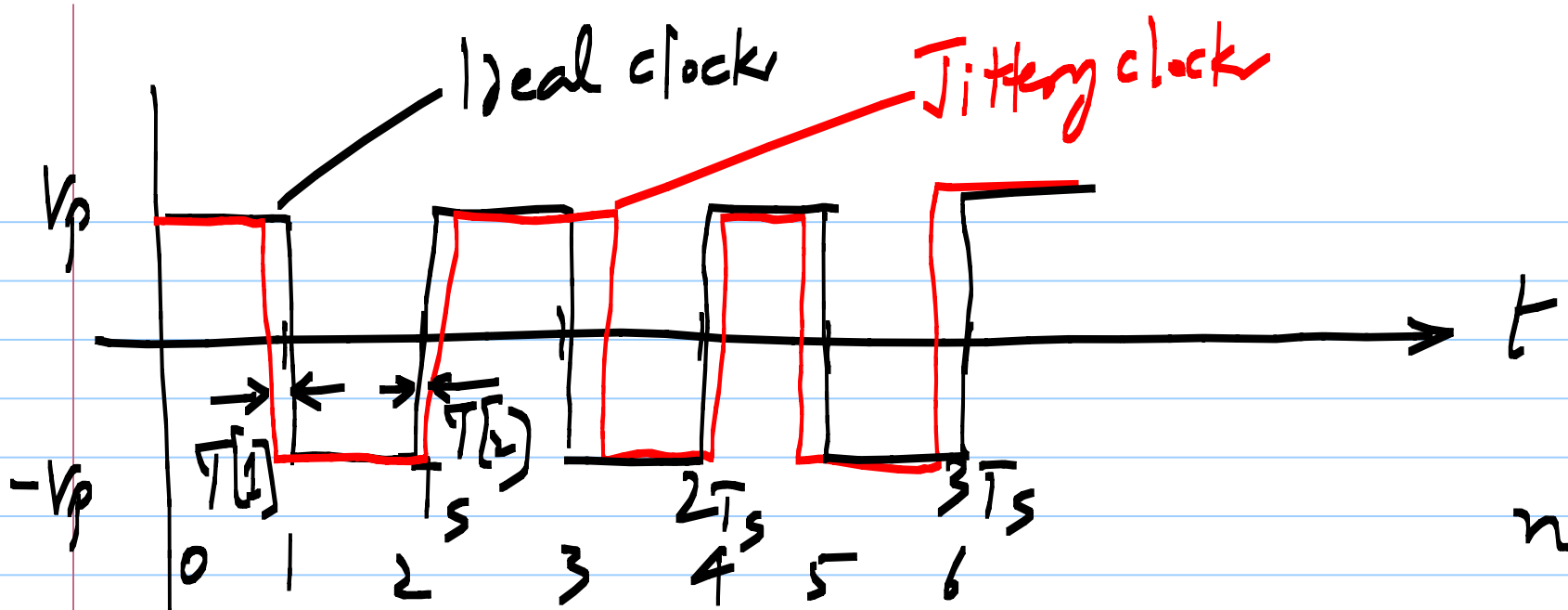
$R_x(\tau) = (\quad) \cdot \exp\left(-\dfrac{|t|}{Rc}\right)$




$S_x(f)$
$4kTR$
kT/C
f_s
$1/2\pi RC$
f
$\frac{2kT}{f_s C}$
kT/C
f
$f_s/2$

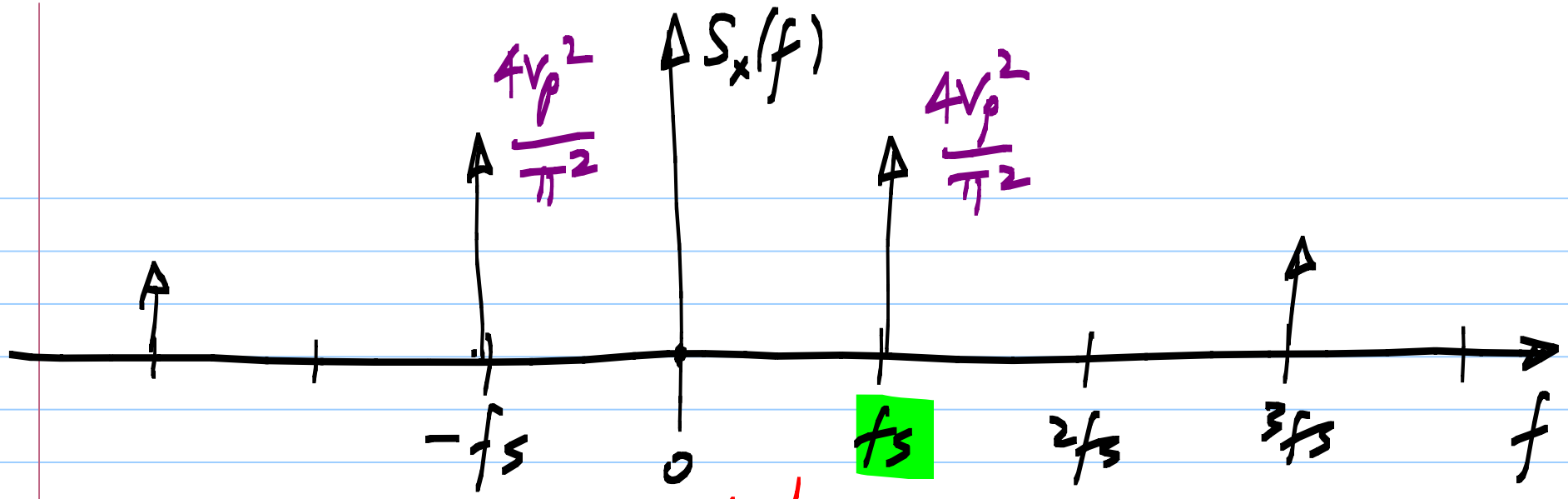


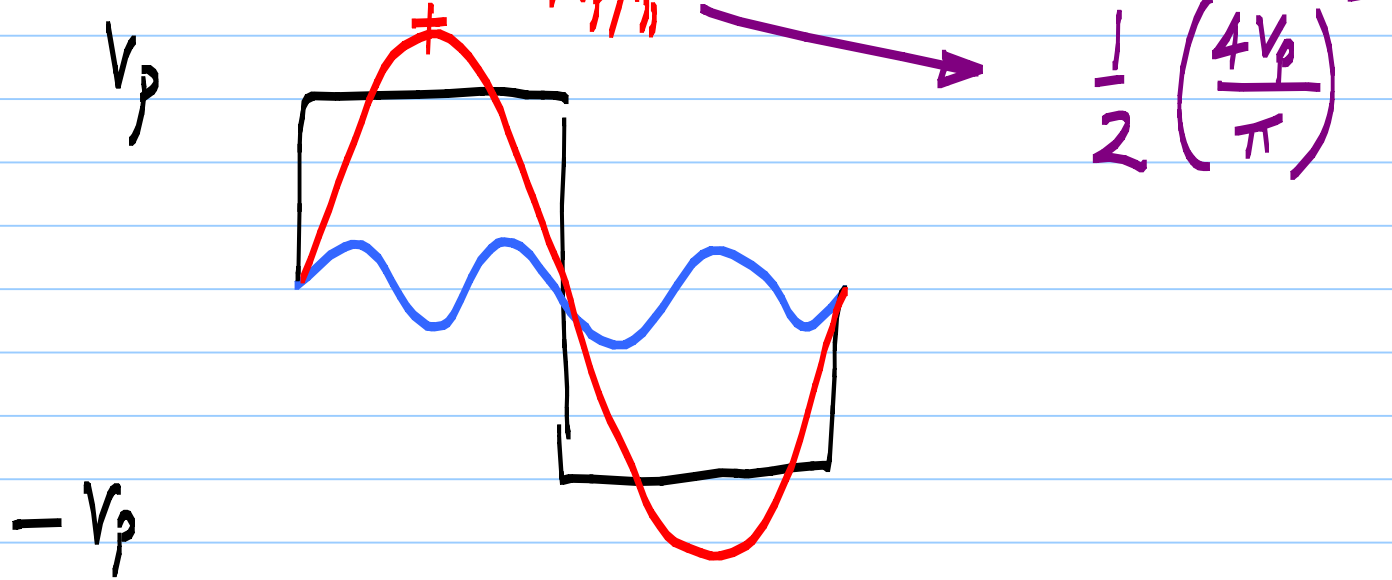
$$Q\left(\frac{T_s/2}{\sigma_j}\right)$$



Jitter of k^{th} edge $T[k]$

→ Actual edge position − Ideal edge position





$$\frac{1}{2}\left(\frac{4V_p}{\pi}\right)^2$$