

$$K \longrightarrow \infty$$

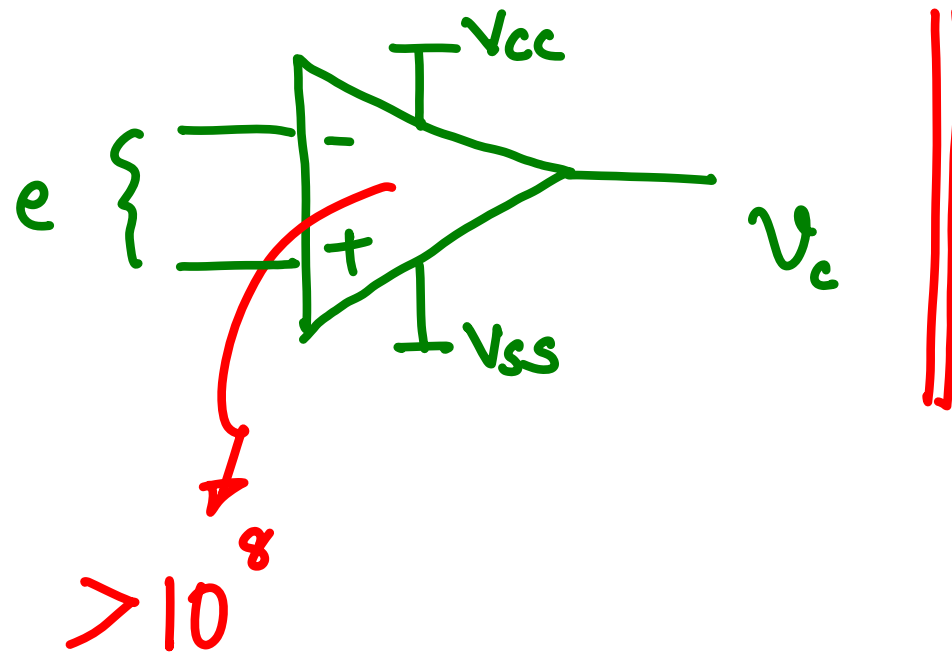
$$L \longrightarrow e \longrightarrow 0$$

$$\downarrow e = \frac{V_c}{K} \uparrow$$

Problem 1 : Noise

2 : Limited input

$$K \Rightarrow \infty$$



$$K \not\Rightarrow \infty$$

$$\Downarrow$$

$$e \neq 0$$

Let

$$K \Rightarrow \infty$$

$K \neq \infty$   
during dynamics  
or transients.

under  
steady state  
conditions

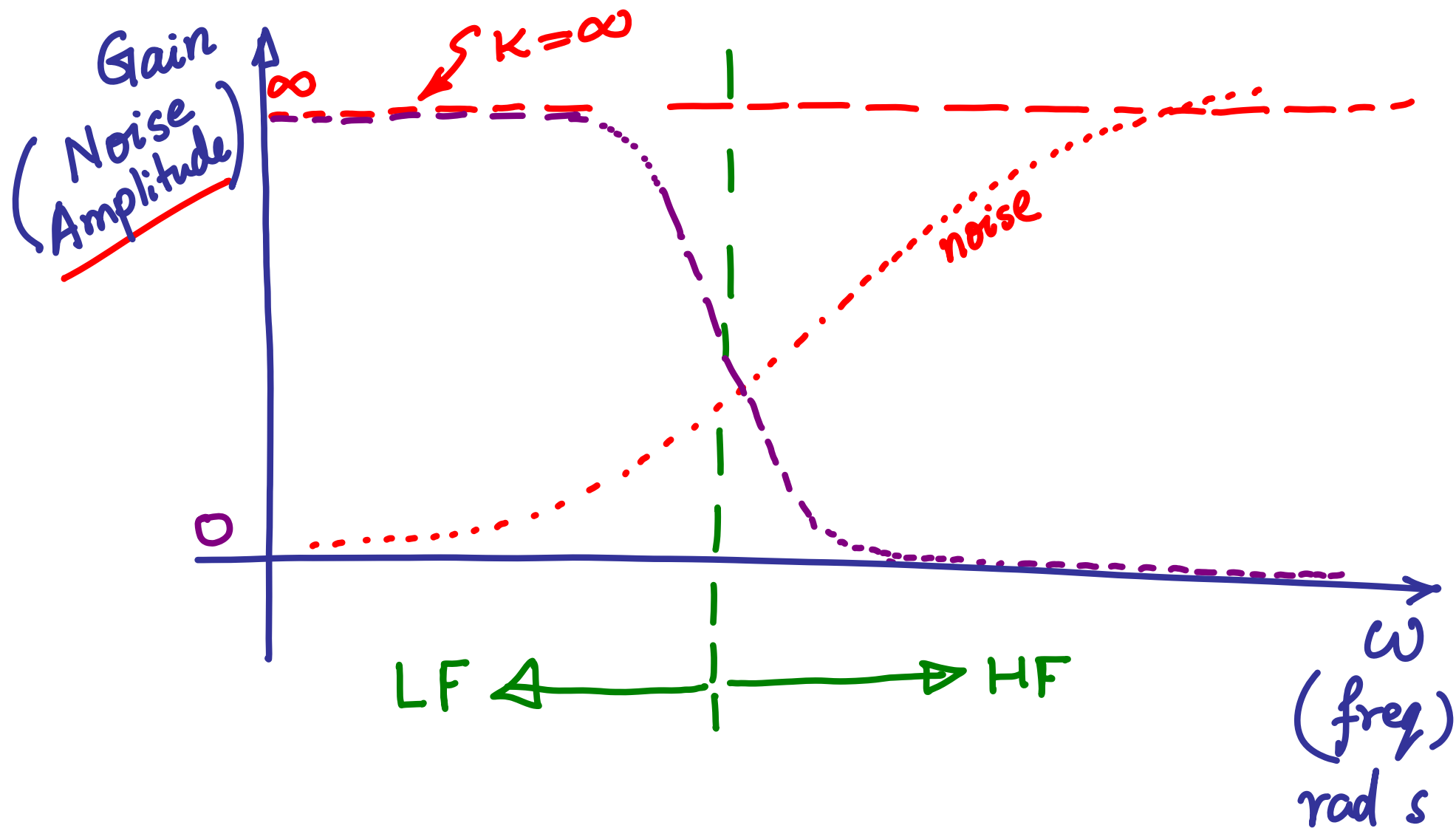
$$e \Downarrow \frac{V_c}{K} \Rightarrow 0$$

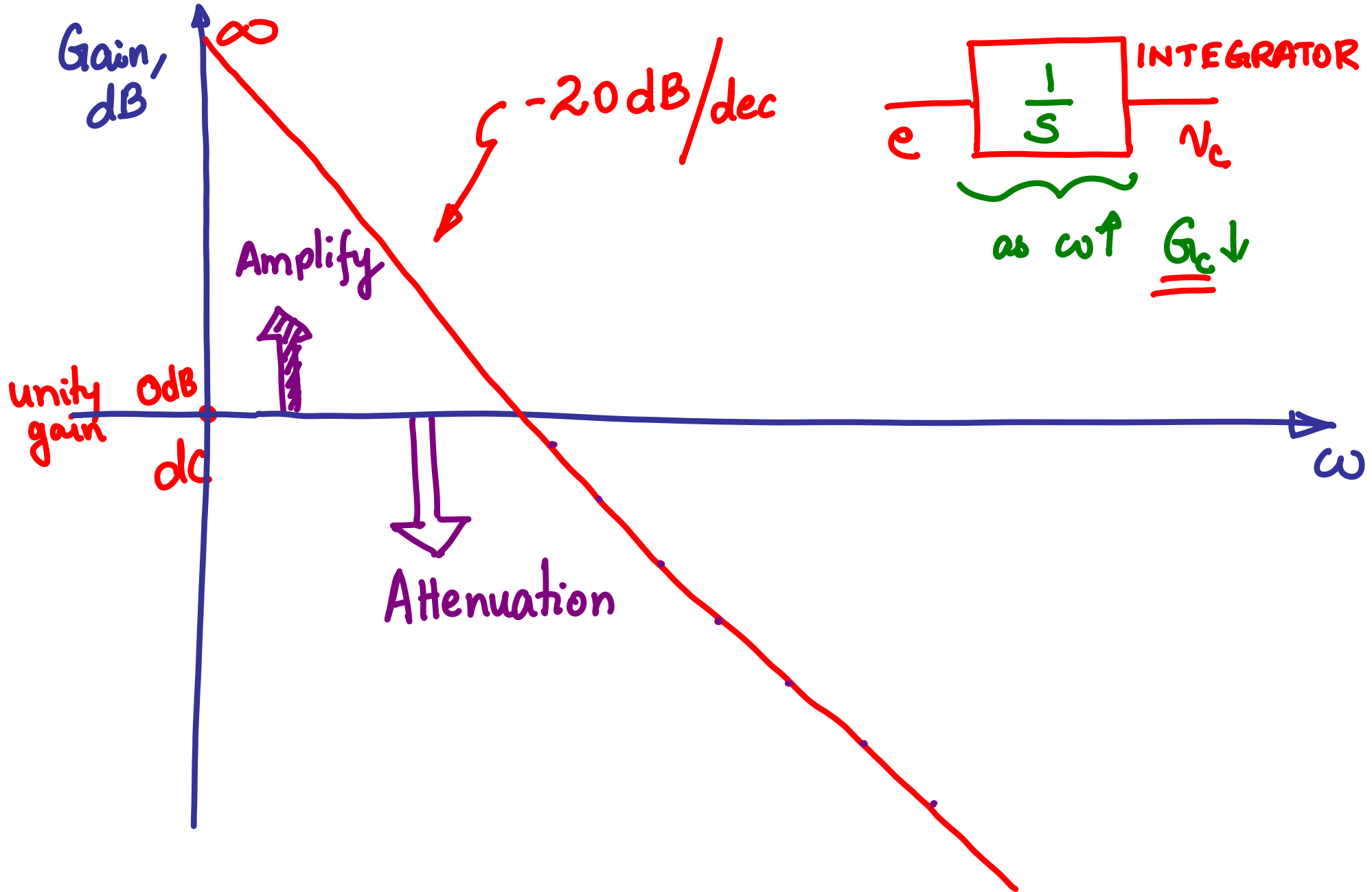
$K \Rightarrow$  varies with frequency

$\left\{ \begin{array}{l} @ \text{ dc (steady state)} \\ K \Rightarrow \infty \end{array} \right\} \left| \begin{array}{l} e_{\text{error}} = 0 \end{array} \right.$

$\left\{ \begin{array}{l} @ \text{ transients (high frequencies)} \\ K \rightarrow \text{low value} \end{array} \right.$

$e \neq 0$

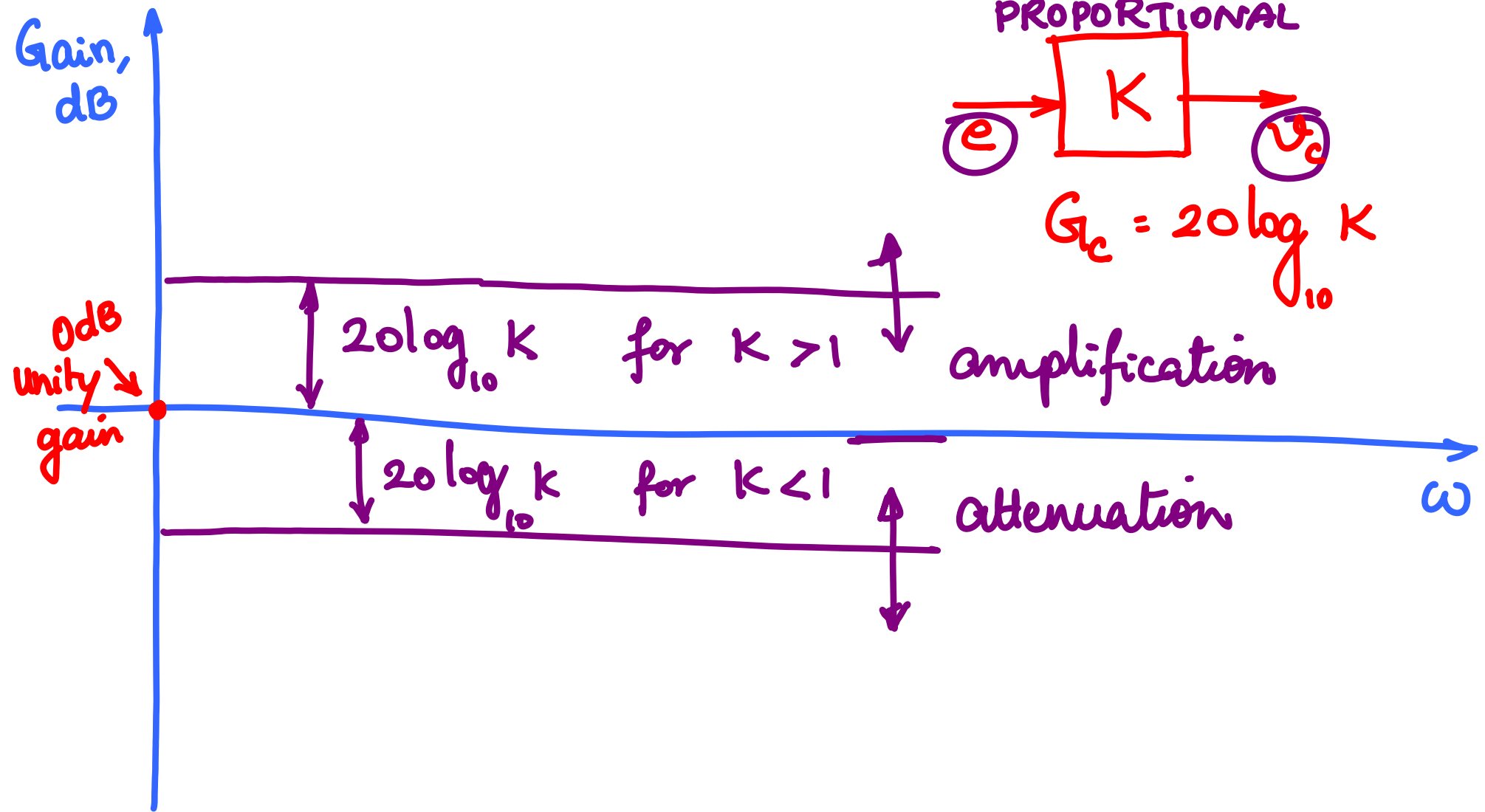


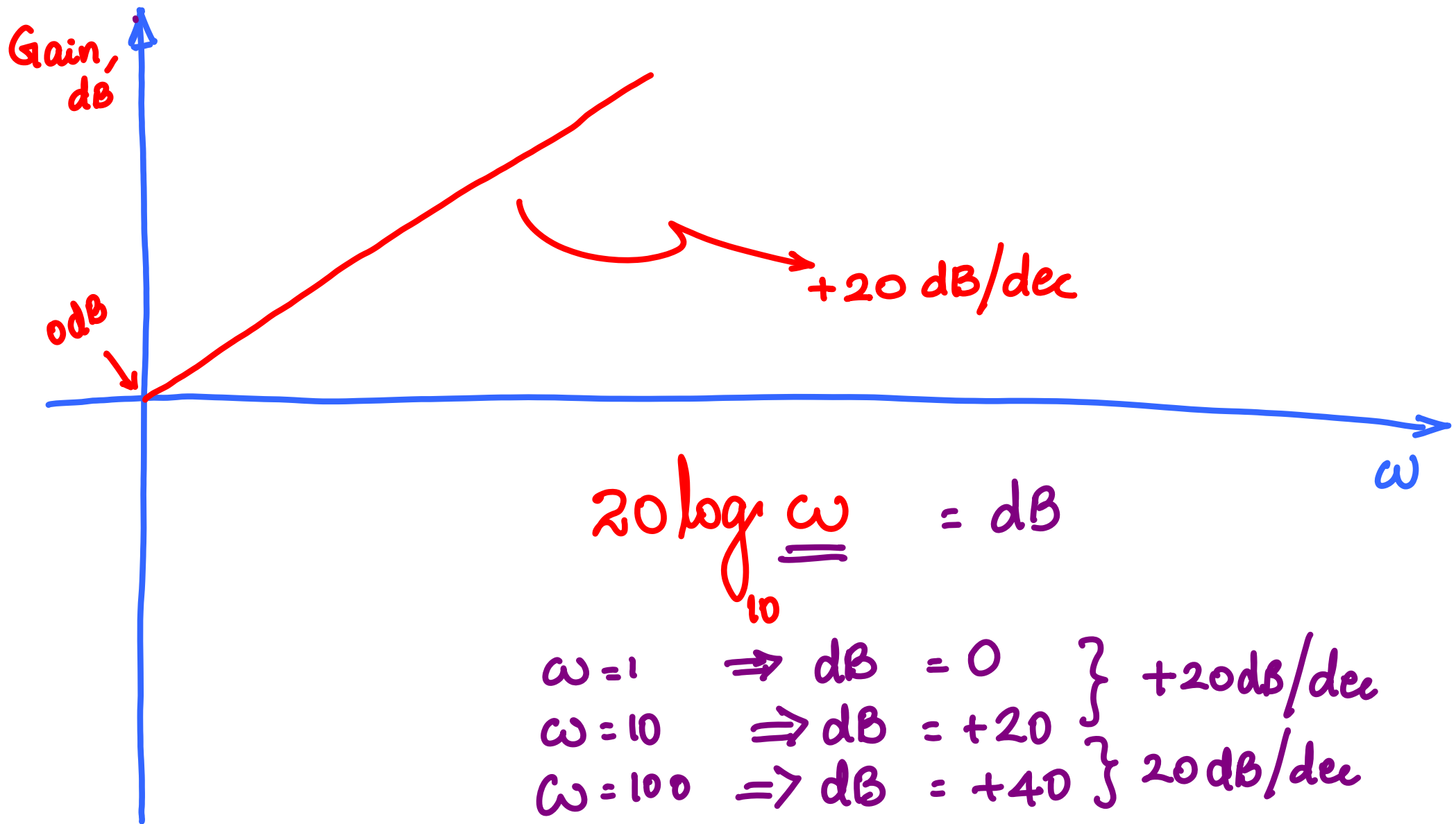


$$-20 \log_{10} \omega = \text{dB}$$

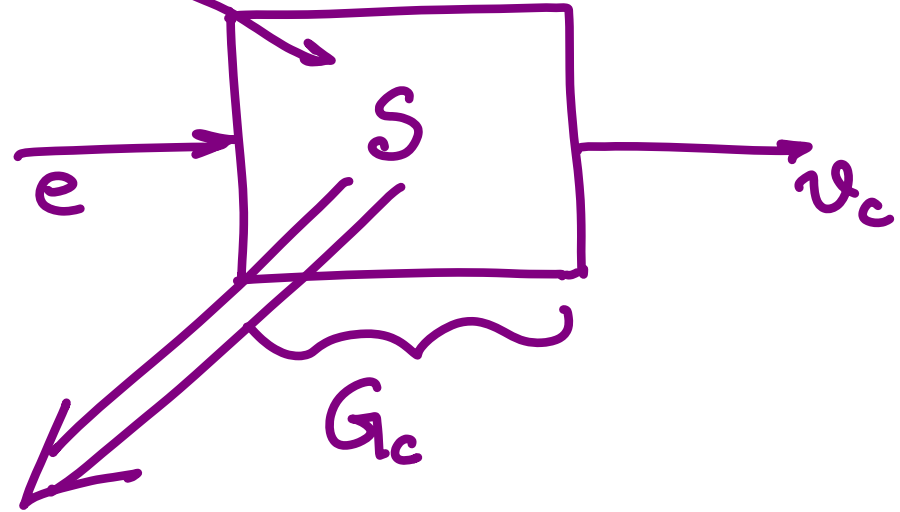
$\omega = 1$	} decade	$\Rightarrow$	dB = 0	} -20 dB/decade
$\omega = 10$		$\Rightarrow$	dB = -20	
$\omega = 100$	} decade	$\Rightarrow$	dB = -40	} -20 dB/decade
$\omega = 1000$		$\Rightarrow$	dB = -60	
$\omega = 10 \text{ KHz}$	} decade	$\Rightarrow$	dB = -80	
$\omega = 100 \text{ KHz}$		$\Rightarrow$	dB = -100	



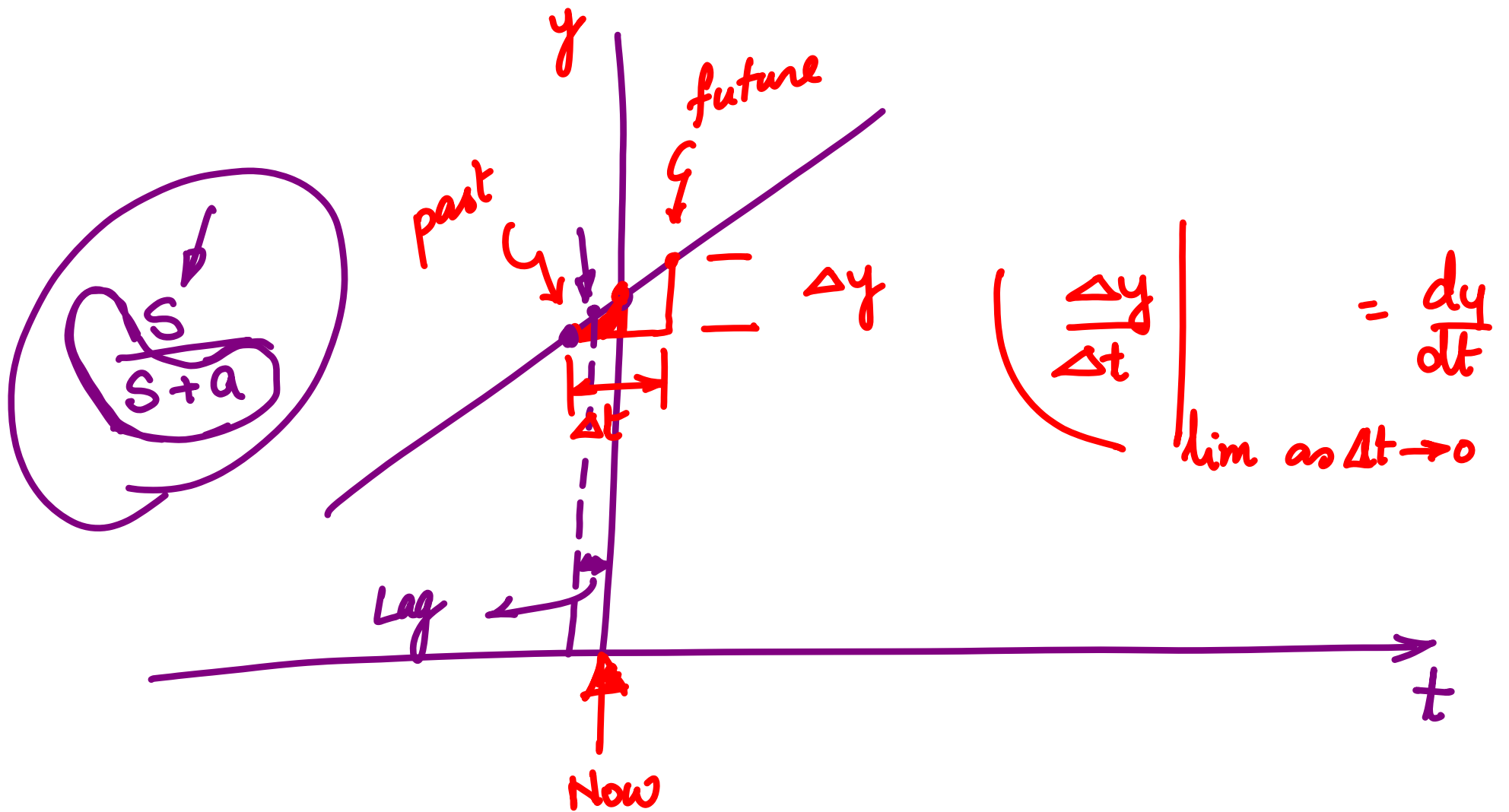




$$20 \log_{10} \omega = \text{dB}$$

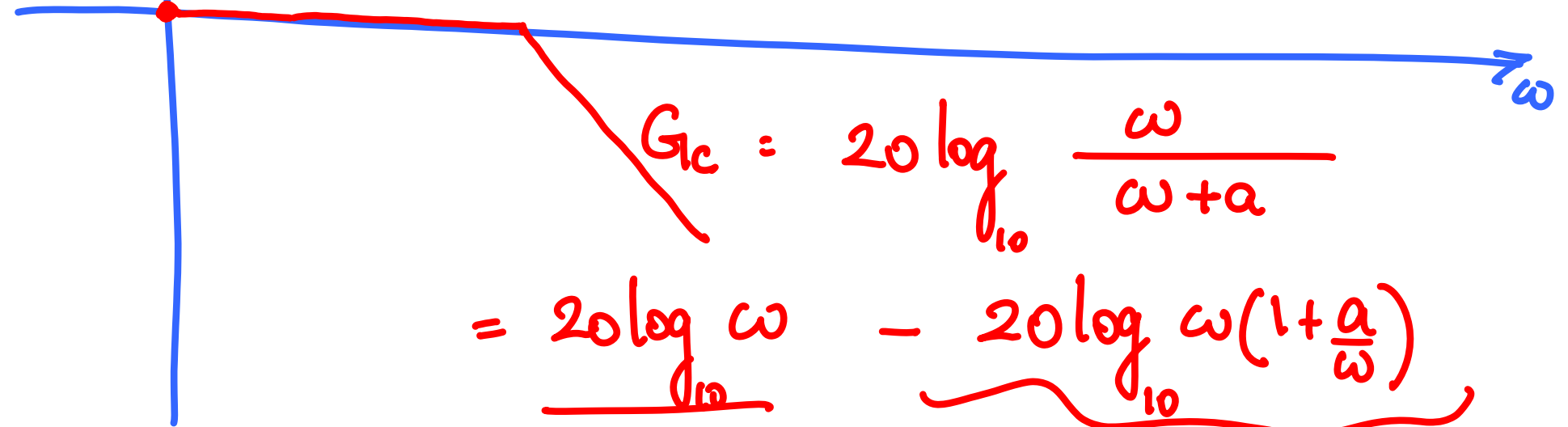
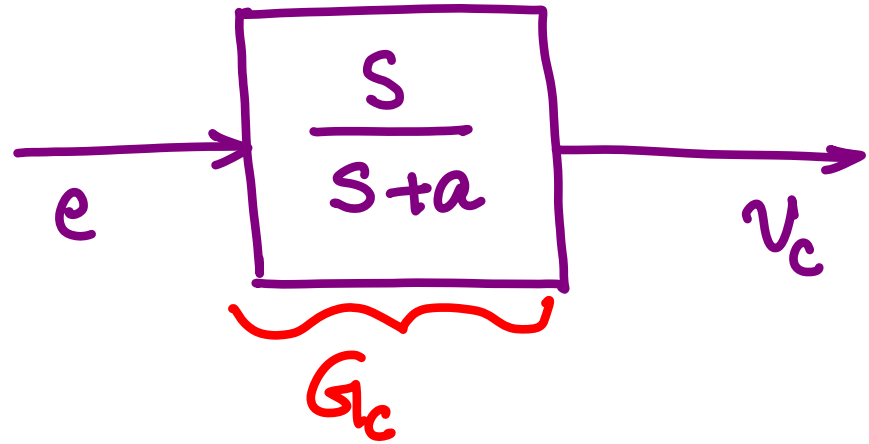


NOT IMPLEMENTABLE



Gain,  
dB

0dB



$\omega \ll a$

