

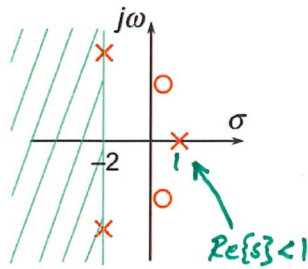
KAUSALITET & konvergensområde för $H(s)$

De tre typerna av sammanhängande konvergensområde motsvarar för systemfunktionen $H(s)$ olika kausalitetsfall:

Antikausalt system

$$h(t \geq 0) = 0$$

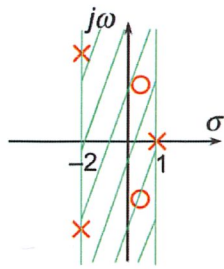
$$\text{Re}\{s\} < -2$$



Allmänt icke-kausalt system

$$h(t < 0, t \geq 0) \neq 0$$

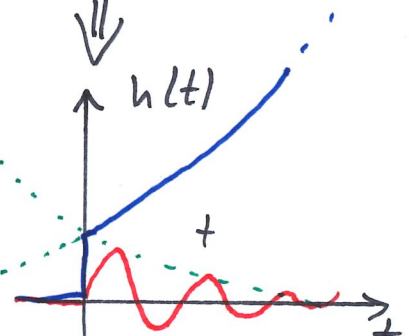
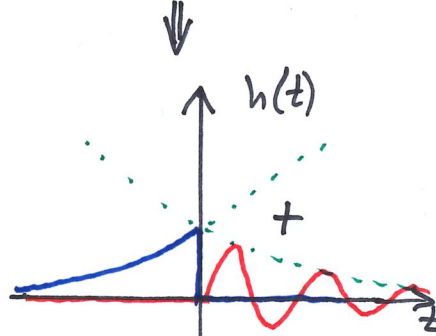
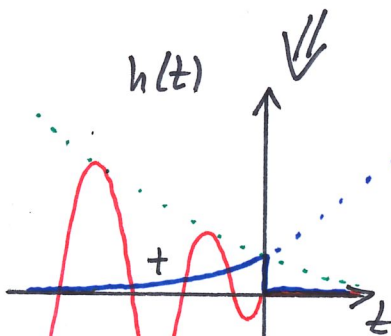
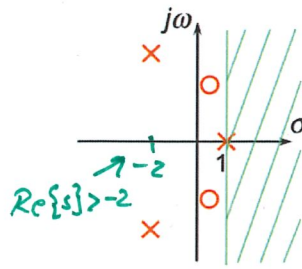
$$-2 < \text{Re}\{s\} < 1$$



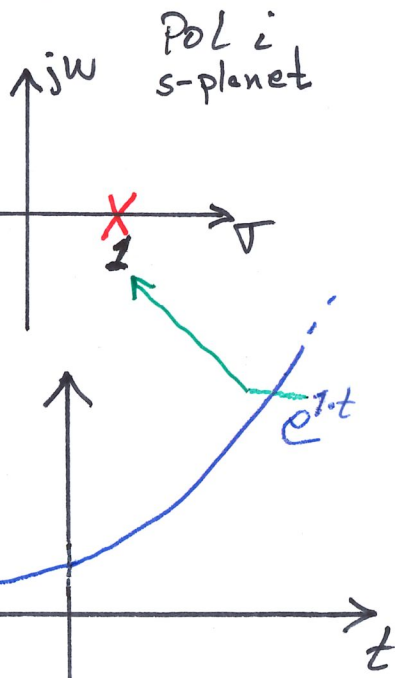
Kausalt system

$$h(t < 0) = 0$$

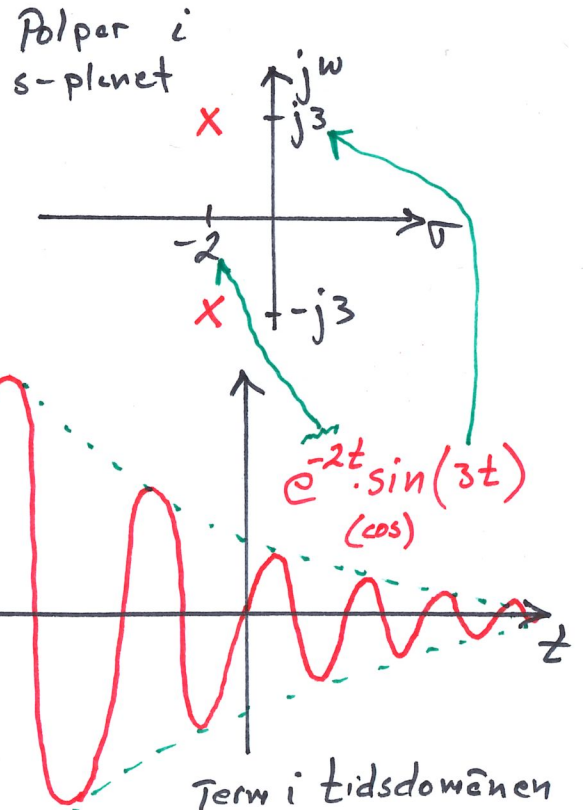
$$\text{Re}\{s\} > 1$$



$\left\{ \begin{array}{l} \text{Högersidigt} \\ \text{Vänstersidigt} \end{array} \right\}$ konvergensområde i s-planet \Leftrightarrow Signaldelen till $\left\{ \begin{array}{l} \text{höger} \\ \text{vänster} \end{array} \right\}$ om $t=0$ i tidsdomänen!



Term i tidsdomänen



Term i tidsdomänen