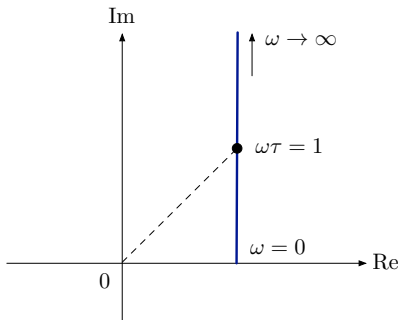


Type 2: $j\omega\tau + 1$

Phase:



- ▶ For small ω (below break-point),
 $\phi \approx 0^\circ$
- ▶ For large ω (above break-point),

$$\begin{aligned}\phi &\approx \angle(j\omega\tau) \\ &= 90^\circ\end{aligned}$$

- ▶ At break-point ($\omega\tau = 1$),

$$\begin{aligned}\phi &= \angle(j + 1) \\ &= 45^\circ\end{aligned}$$