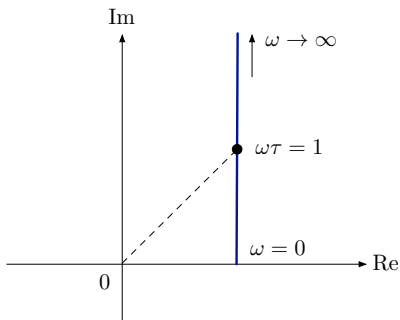


Type 2: $j\omega\tau + 1$

Magnitude:



- ▶ For small ω (below break-point), $M \approx 1$ (horizontal line)
- ▶ For large ω (above break-point),

$$\begin{aligned}\log M &\approx \log |j\omega\tau| = \log \omega\tau \\ &= \log \tau + \log \omega\end{aligned}$$

– a line of slope 1 passing through the point $(1/\tau, 1)$ (log-log scale)

- ▶ **Careful:** these are just *asymptotes* (the actual value of M at $\omega = 1/\tau$ is $\sqrt{2}$)