$$\begin{aligned}
\exp\left[i(kx-\omega t)\right] &= \exp\left[i(kx-\mathrm{Re}(\omega)t)+\mathrm{Im}(\omega)t\right] \\
&= \underbrace{\exp\left[i(kx-\mathrm{Re}(\omega)t)\right]}_{\text{oscillate with amplitude 1}} \times \underbrace{\exp\left[\mathrm{Im}(\omega)t\right]}_{\text{increase or decrease}}
\end{aligned}$$