

Example A-2: Here are some examples:

$$(90^\circ): 1 \angle \pi/2$$

$$\begin{aligned} e^{j\pi/2} &= \cos(\pi/2) + j \sin(\pi/2) \\ &= 0 + j1 = j \end{aligned}$$

$$(180^\circ): 1 \angle \pi$$

$$\begin{aligned} e^{j\pi} &= \cos(\pi) + j \sin(\pi) \\ &= -1 + j0 = -1 \end{aligned}$$

$$(45^\circ): 1 \angle \pi/4$$

$$\begin{aligned} e^{j\pi/4} &= \cos(\pi/4) + j \sin(\pi/4) \\ &= \frac{\sqrt{2}}{2} + j \frac{\sqrt{2}}{2} \end{aligned}$$

$$(60^\circ): 1 \angle \pi/3$$

$$\begin{aligned} e^{j\pi/3} &= \cos(\pi/3) + j \sin(\pi/3) \\ &= \frac{1}{2} + j \frac{\sqrt{3}}{2} \end{aligned}$$

