

Graph each function in the interval from 0 to 2π .

1. $y = -\sin\left(x + \frac{\pi}{2}\right)$

$\left(-\frac{\pi}{2}, 0\right)$

$\left(0, -1\right)$

$\left(\frac{\pi}{2}, 0\right)$

$\left(\pi, 1\right)$

$\left(\frac{3\pi}{2}, 0\right)$

$\left(2\pi, -1\right)$

Amp 1
midline $y=0$
P.S. $\frac{\pi}{2}$ left
period $2\pi \cdot \frac{1}{4} = \frac{\pi}{2}$

2. $y = 3 \sin\left(x - \frac{\pi}{4}\right) + 2$

$\left(\frac{\pi}{4}, 2\right)$

$\left(\frac{3\pi}{4}, 5\right)$

$\left(\frac{5\pi}{4}, 2\right)$

$\left(\frac{7\pi}{4}, -1\right)$

Amp 3
mid $y=2$
P.S. $\frac{\pi}{4}$ right
period 2π
 $\frac{\pi}{2}$

3. $y = \cos \frac{1}{2}x + 1$

$\left(0, 2\right)$

$\left(\pi, 1\right)$

$\left(2\pi, 0\right)$

$\left(3\pi, 1\right)$

Amp 1
mid $y=1$
P.h.s. none
period $\frac{2\pi}{1/2} = 4\pi$