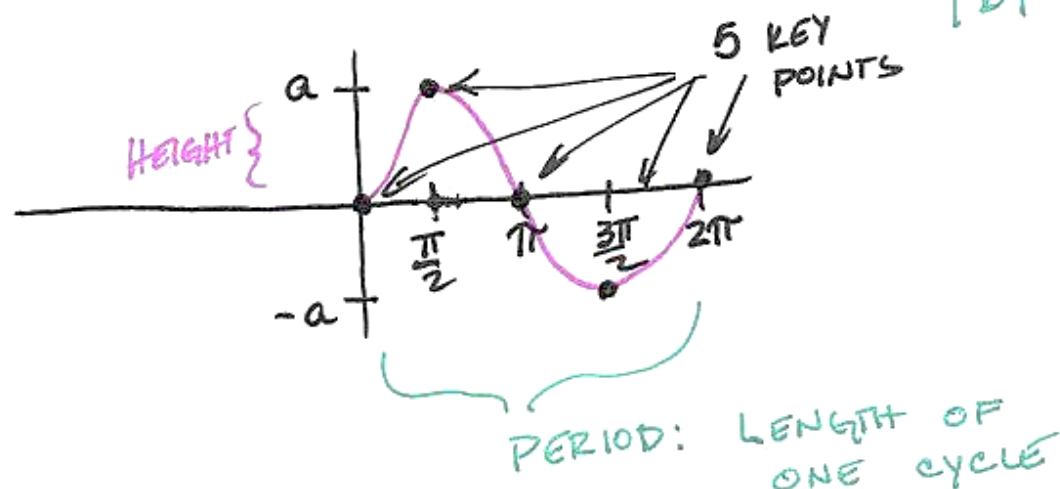


SEC 2.5 GRAPHS OF SINE & COSINE FUNCTIONS

1. SINE FUNCTION: $y = d + a \sin(b(x-c))$

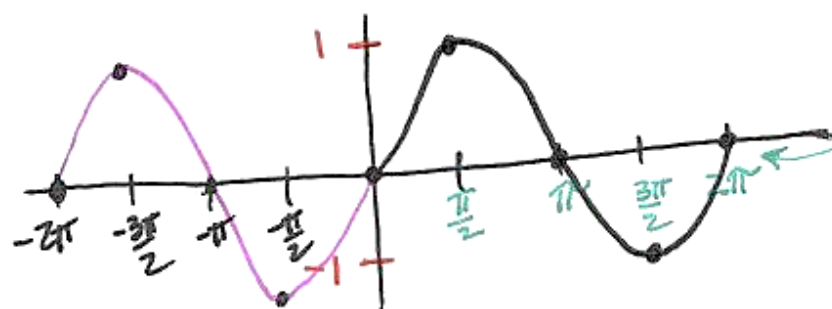
↑
AMPLITUDE
 $|a|$

↑
PERIOD
 $\frac{2\pi}{|b|}$



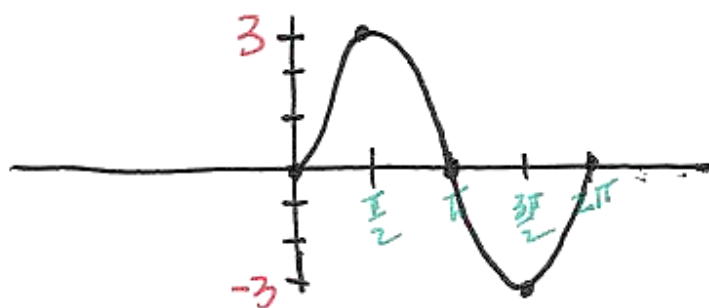
EX. $y = |\sin x|$

$\frac{2\pi}{1} = 2\pi$ PERIOD



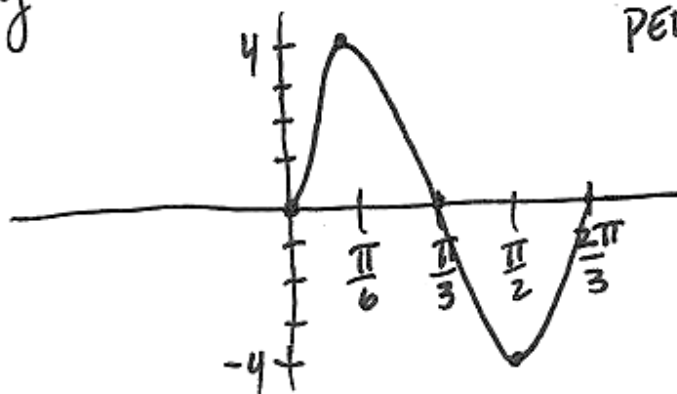
EX. $y = 3 \sin |x|$

$\frac{2\pi}{1} = 2\pi$
PERIOD



EX. $y = 4 \sin 3x$

AMP: 4
PERIOD $\frac{2\pi}{3}$

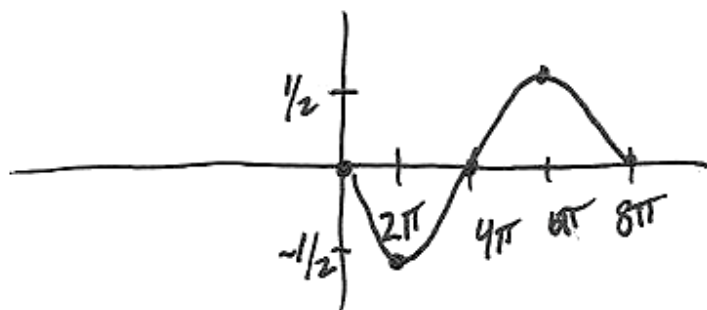


EX. $y = -\frac{1}{2} \sin \frac{1}{4}x$

AMP: $|\frac{1}{2}| = \frac{1}{2}$

REFLECTED
ABOUT X-AXIS

PER $\frac{2\pi \cdot 4}{\frac{1}{4}} = 8\pi$



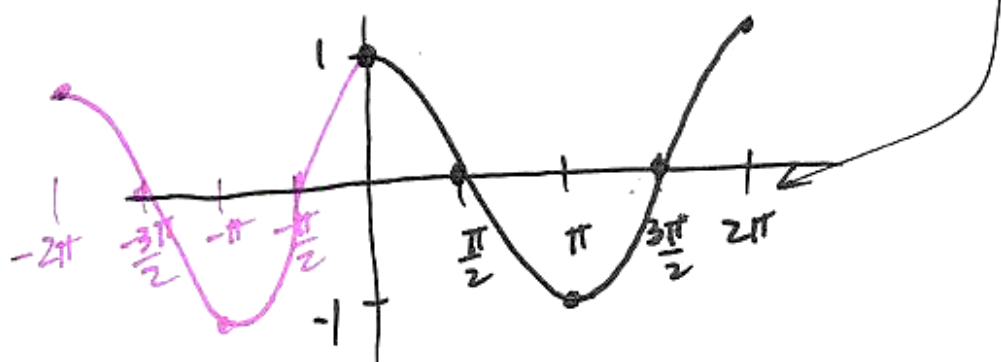
2. COSINE GRAPH $y = d + a \cos(b(x-c))$

↑ AMPLITUDE ↑ PERIOD

EX. $y = |\cos| x$

AMP = $|1| = 1$

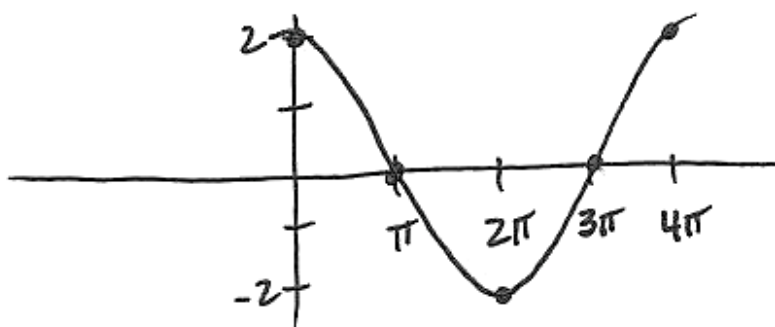
PER $\frac{2\pi}{|1|} = 2\pi$



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

AMP : 2

PER $\frac{2\pi}{\frac{1}{2}} = 4\pi$



$$y = -6 \cos \frac{3\pi}{4} x$$

AMP 6
REFLECTED

$$\frac{2\pi}{\frac{3\pi}{4}} \cdot \frac{4}{3\pi} = \frac{8}{3}$$

