

4-5 Graphs of Sine and Cosine

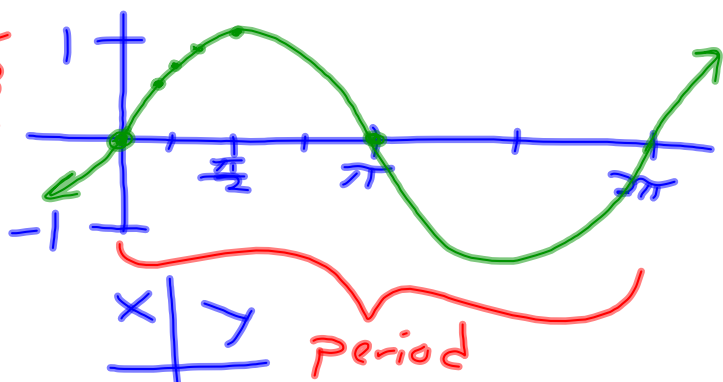
Ex 1

Graph:

$$y = \sin x$$

X	Y
0	0
$\frac{\pi}{6}$	$\frac{1}{2}$
$\frac{\pi}{4}$	$\frac{\sqrt{2}}{2}$
$\frac{\pi}{3}$	$\frac{\sqrt{3}}{2}$
$\frac{\pi}{2}$	1
$\frac{2\pi}{3}$	$\frac{\sqrt{3}}{2}$
$\frac{3\pi}{4}$	$\frac{\sqrt{2}}{2}$
$\frac{5\pi}{6}$	$\frac{1}{2}$
π	0
$\frac{7\pi}{6}$	$-\frac{1}{2}$
$\frac{3\pi}{2}$	-1
$\frac{5\pi}{3}$	$-\frac{\sqrt{3}}{2}$
$\frac{11\pi}{6}$	$-\frac{1}{2}$
2π	0

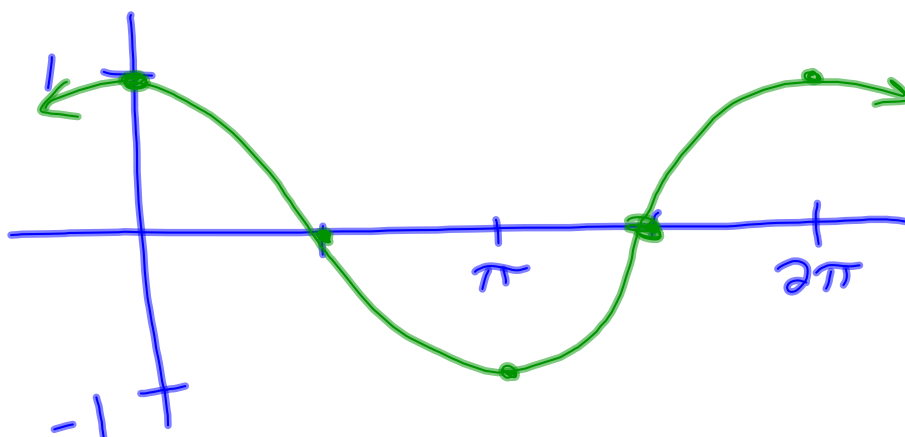
Li ≈ 2.7
≈ 2.86



Ex 2

Graph:

$$y = \cos x$$



$$y = \underline{a} \sin bx$$

$$|a| = \text{amplitude}$$

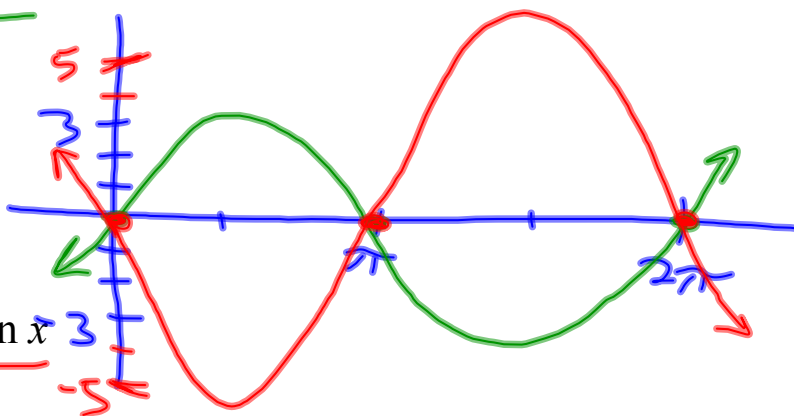
$$y = \underline{a} \cos bx$$

$$\frac{2\pi}{b} = \text{period}$$

Ex. 3 Graph:

$$y = \underline{3} \sin x$$

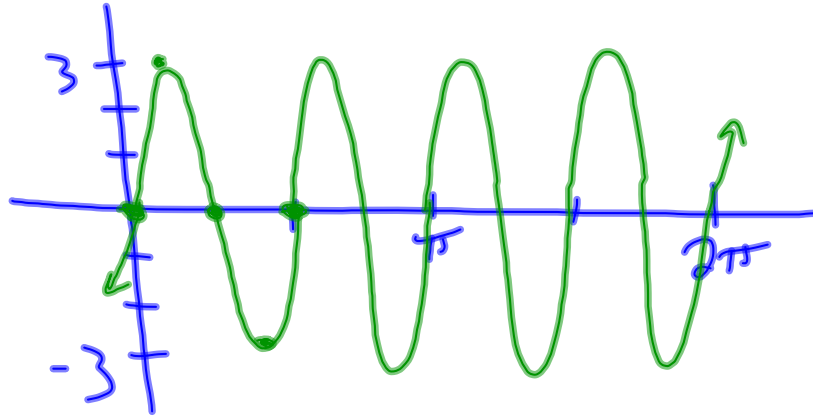
$$y = \underline{-5} \sin x$$



Ex. 4 Graph:

$$y = 3 \sin(4x)$$

$$\text{period} = \frac{2\pi}{4}$$
$$= \frac{\pi}{2}$$



Ex. 5 Graph:

$$y = 2 \cos\left(\frac{x}{3}\right)$$

Homework
p.304
#3-13 odds, 35-38