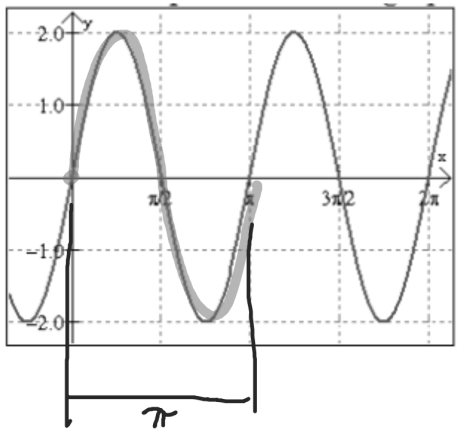
Write the equation of this sine function: y = aSinbx



Period = π

amp = 2 → a = 2

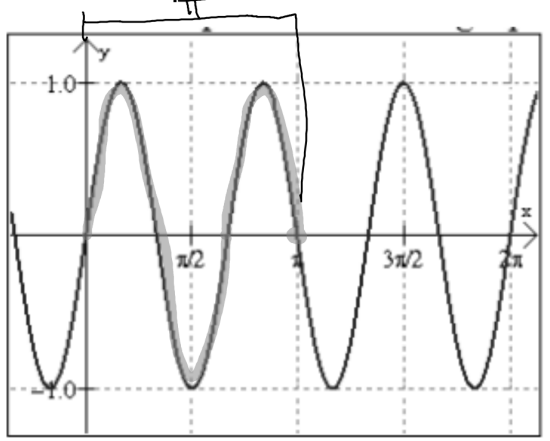
$\text{Period} = \frac{2\pi}{b}$

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

$y = 2\sin 2x$

You can also find b this way:
b= # of periods in 2π

Write the equation of this sine function.



a = 1

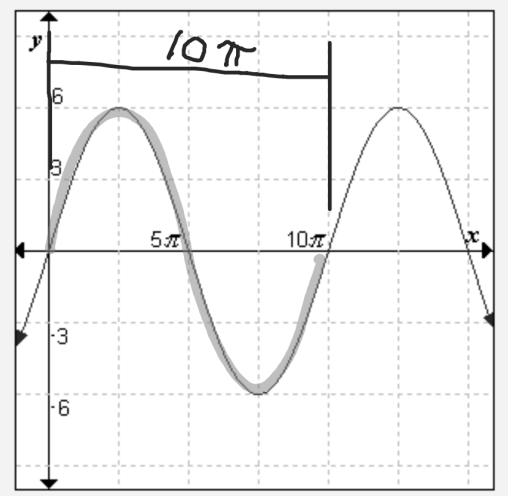
$\text{period} = \frac{\pi}{3/2} = \pi \cdot \frac{2}{3} = \frac{2\pi}{3}$

$b = \frac{2\pi}{\frac{2\pi}{3}} = 2\pi \cdot \frac{3}{2\pi}$

b = 3

$y = \sin 3x$

Write the equation of this sine function.



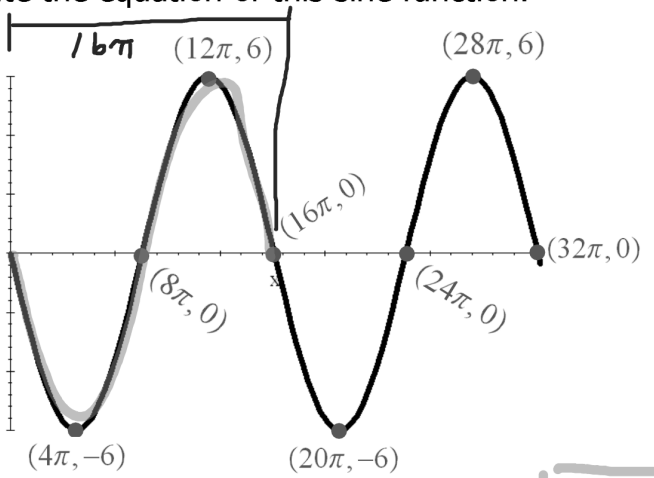
a = 6

period = 10π

$b = \frac{2\pi}{10\pi} = \frac{1}{5}$

$y = 6\sin\frac{x}{5}$

Write the equation of this sine function.



negative because the graph is upside down

a = -6

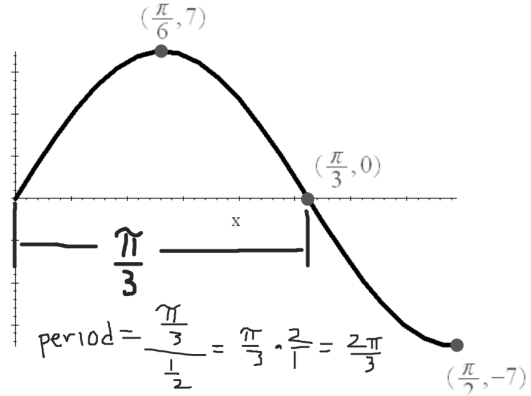
Period = 16π

$b = \frac{2\pi}{16\pi}$

$b = \frac{1}{8}$

$y = -6\sin\frac{x}{8}$

Write the equation of this sine function.



$a = 7$

period $= \frac{2\pi}{3}$

$b = \frac{2\pi}{\frac{2\pi}{3}} = 2\pi \cdot \frac{3}{2\pi}$

$b = 3$

$y = 7 \sin 3x$

You can now finish Hwk #31 Sec 13-4

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Problems 13, 14, 22, 23, 27, 29-32, 42

for #'s 22, 23, 27 label the coordinates of all Max's, Min's, and x-int.