

# Advanced Math

4-5

## Graphs of Sine and Cosine Functions

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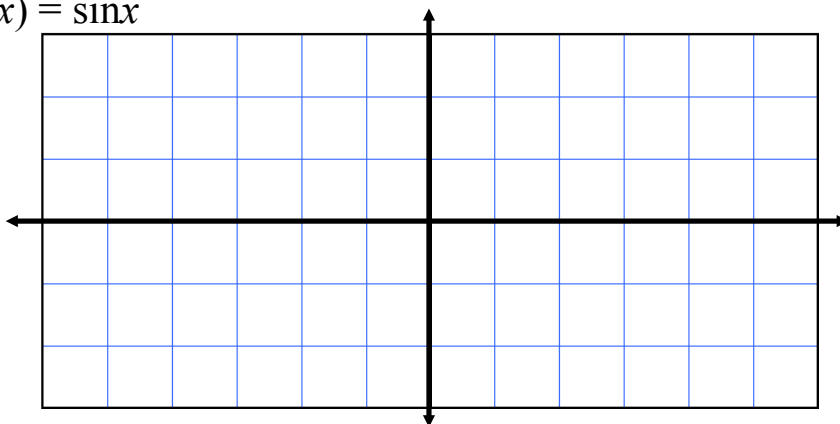
Amplitude -

Period -

Phase Shift -

Graph the Sine function.

$$f(x) = \sin x$$



Domain:

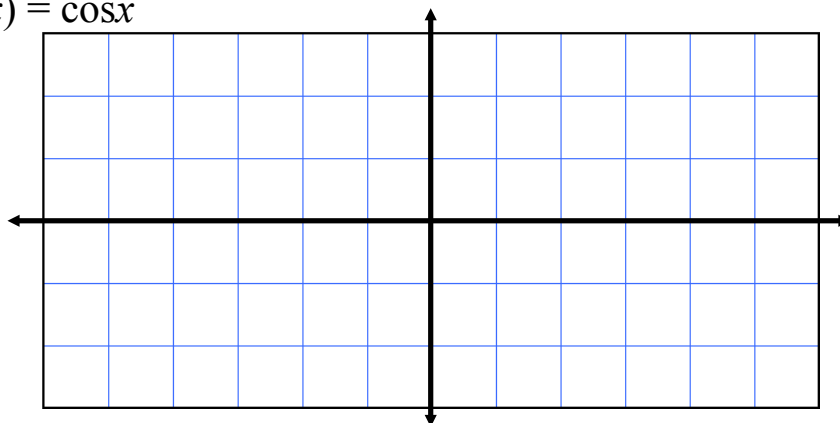
Range:

Period:

Amplitude:

Graph the Cosine function.

$$g(x) = \cos x$$



Domain:

Range:

Period:

Amplitude:

Given the general Sine function, list the effects of  $a, b, c,$  and  $d.$

$$f(x) = a \sin (bx - c) + d$$

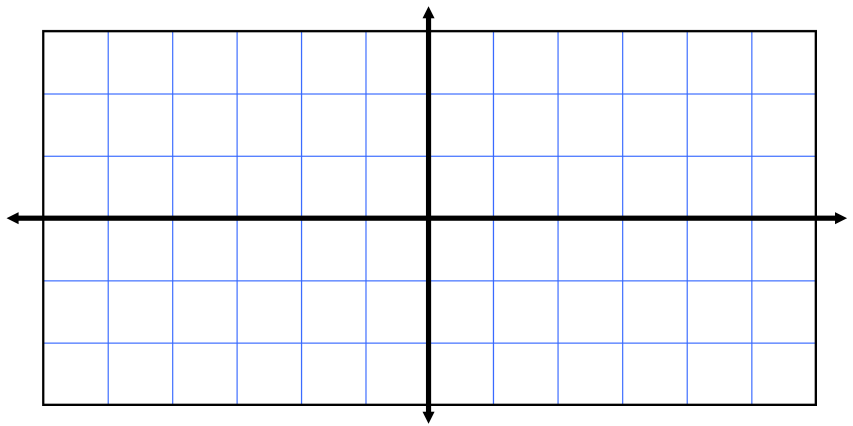
$a:$

$b:$

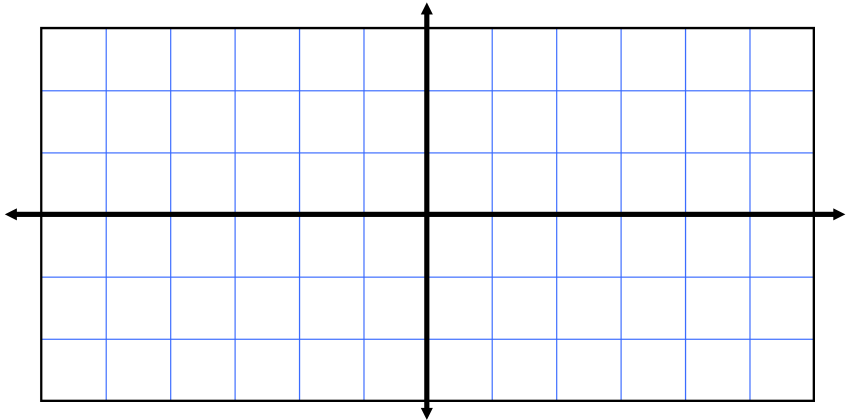
$c:$

$d:$

Graph:  $h(x) = \frac{1}{2} \sin x.$



Graph:  $b(x) = 4 \cos(3x).$



Graph the following:

1)  $f(x) = \sin x$

2)  $g(x) = \cos x$

3)  $h(x) = 3 \sin x$

4)  $j(x) = \cos \frac{1}{2} x$

5)  $k(x) = 2 \sin(2x) - 1$

Assignment:  
pg. 409 and  
1-14 all