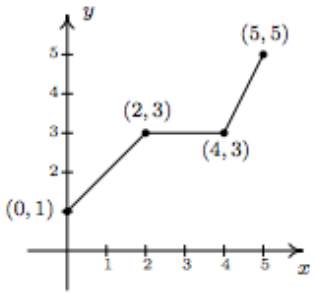
Lesson #11

# Graphs of Functions

a) $f(x)=x^2$ b) $f(x) = (x+2)^2+2$ c) $f(x) = -3(x+3)^2$ d) $f(x)= |x^2-2|$

| | |
|---|---|
| y= - f(x) | |
| y= f( - x) | |
| y= f(x) +c | |
| y=f(x) – c | |
| y= f(x+c) | |
| y=f(x – c ) | |
| y= 3f(x) | |
| y= (1/3) f(x) | |
| y= f(3x) | |
| y= f( (1/3)x) | |
| y= \|f(x)\| | |

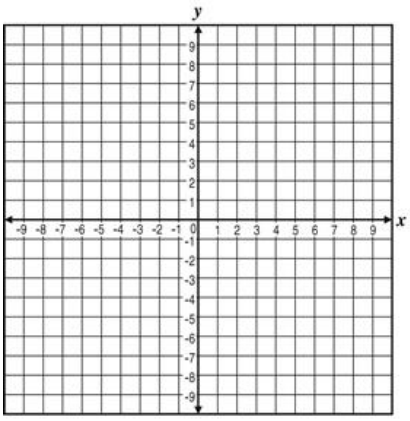
Lesson #11



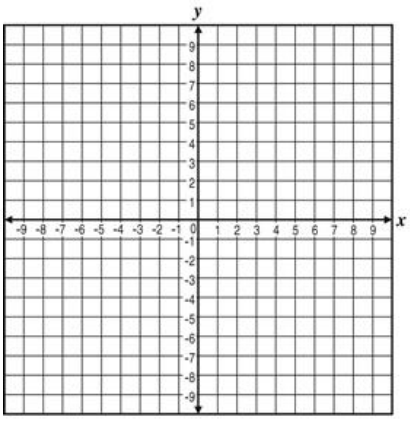

$y = f(x)$

Graph each of the following:

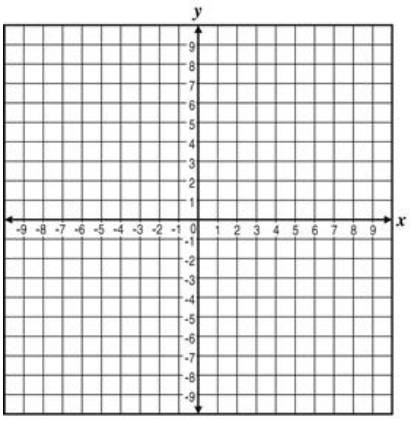
$y = g(x) = f(x) + 2$



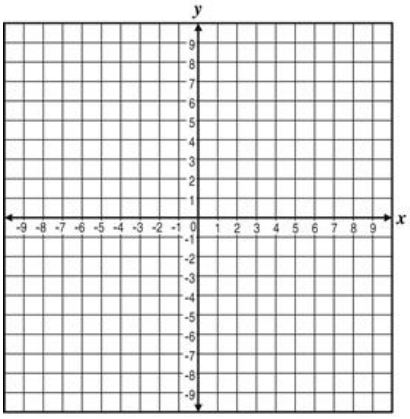

$y = g(x) = f(x + 2)$



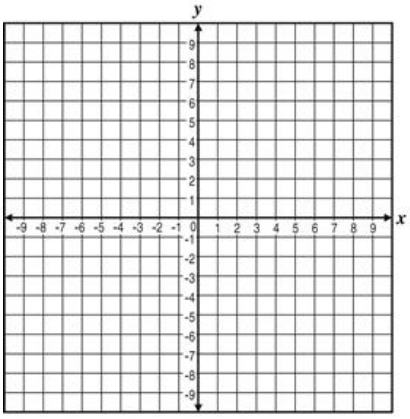

$y = -f(x)$



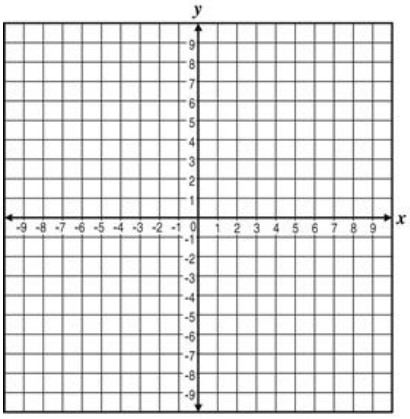

$y = f(-x)$



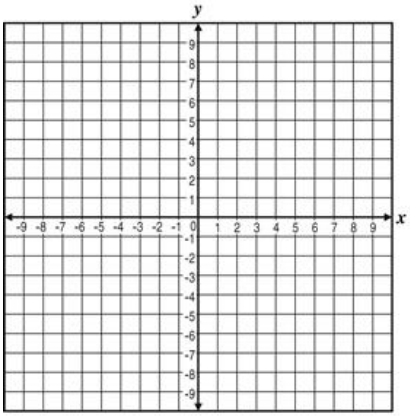

$y = 2f(x)$



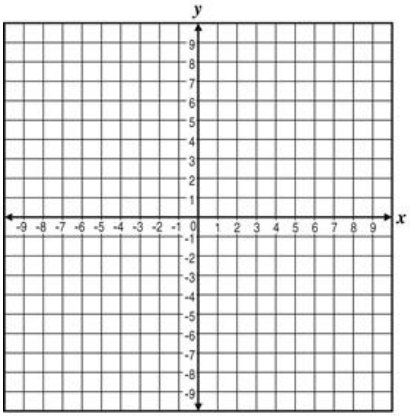

$y = \frac{1}{2}f(x)$




$y = g(x) = f(2x)$

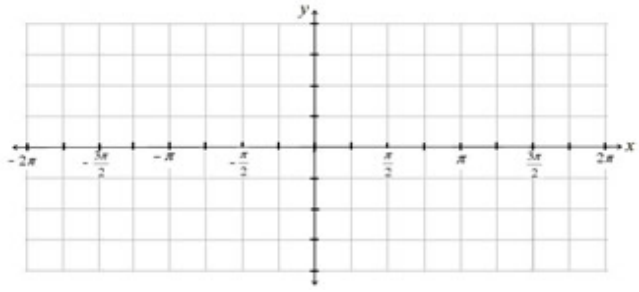



$y = g(x) = f\left(\frac{1}{2}x\right)$

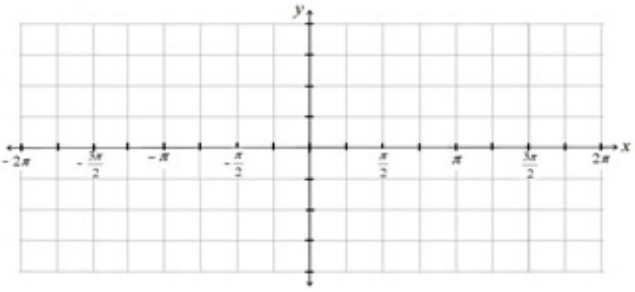


Lesson #11

y=sinx



y=cosx



HW Question:
Find an equation of the form y=D+AsinBx or y=D+AcosBx

A-_____- The graph will oscillate between A and –A.

B-_____

Period= _____ - The time it takes to complete one cycle.

D-_____

Write the equation for the following graph.