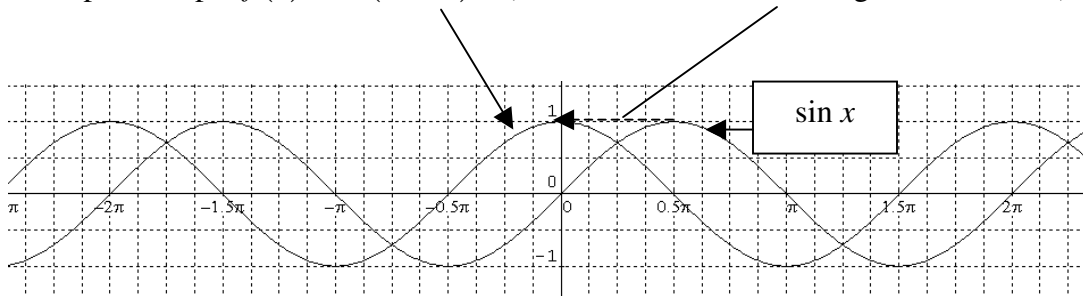


Phase Shift and Vertical Translations

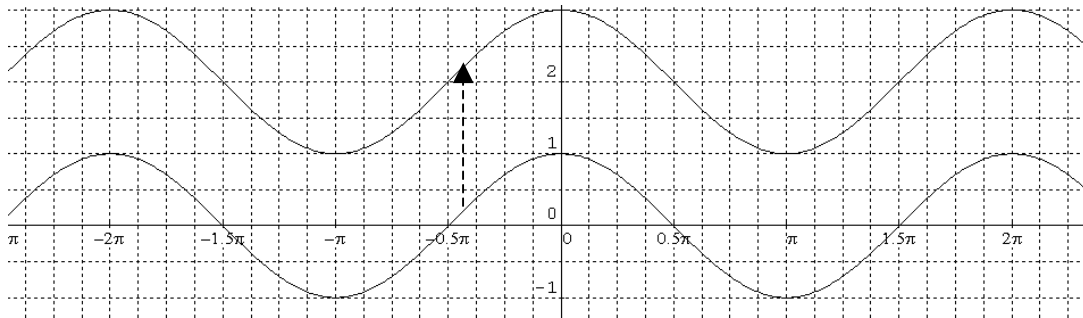
You will recognize these as horizontal and vertical translations!

Example: Graph $f(x) = \sin(x + 90)$. (A horizontal shift of 90 degrees to the left.)



Always graph the original function first, then the transformation.

Example 2: Graph $f(x) = \cos x + 2$. (Vertical translation up 2 units).



Homework: pg. 28 #3, 4, 5, 6, 8ac, 9ace, 13, 14*