

1. Graph the parent function and each transformation.

A)  $A(x) = \sin\left(\frac{1}{2}\left(x + \frac{\pi}{4}\right)\right)$

B)  $B(x) = 2 \sin x - 2$

C)  $C(x) = \cos(x - \pi) + 2$

D)  $D(x) = -4 \cos 2x$

E)  $E(x) = 2 \sin\left(x - \frac{\pi}{3}\right)$

F)  $F(x) = 4 \sin(-2x)$

G)  $G(x) = 3 \cos\left(\frac{1}{2}\left(x - \frac{\pi}{6}\right)\right)$

H)  $H(x) = -2 \sin\left(x + \frac{\pi}{3}\right) - 1$

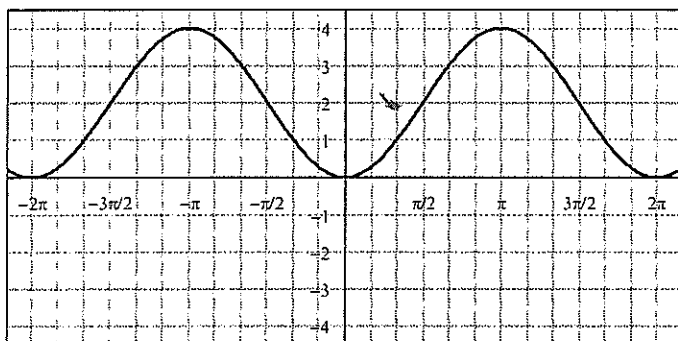
I)  $I(x) = 4 \cos 3x$

J)  $J(x) = -\sin(x - \pi) + 3$

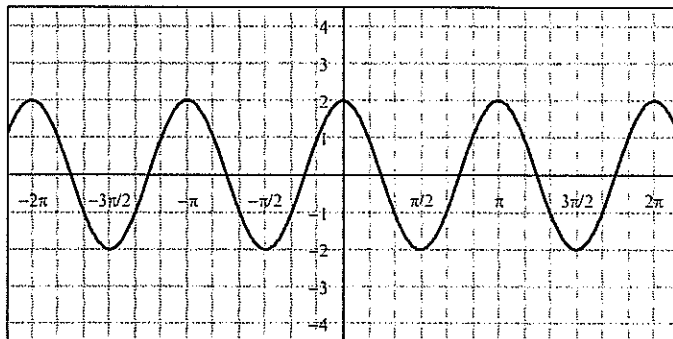
K)  $K(x) = \frac{3}{2} \sin\left(x - \frac{\pi}{2}\right)$

L)  $L(x) = 3 \cos(x - 2\pi) - 1$

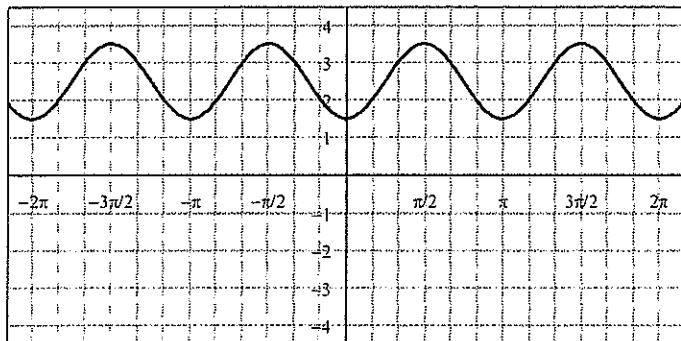
2. Write an equation for each of the following graphs.



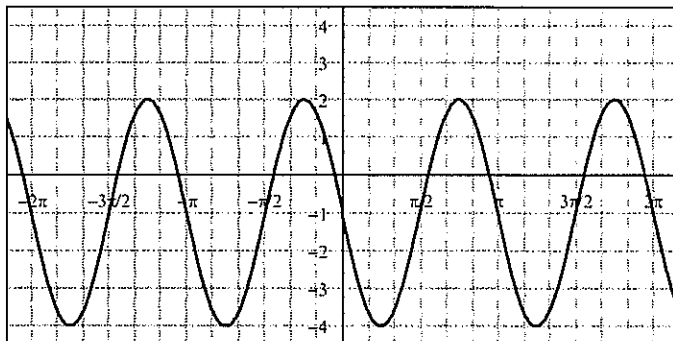
$$y = 2 \sin\left(x - \frac{\pi}{2}\right) + 2$$



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



$$f(x) = -\cos(2x) + 5/2$$



$$f(x) = 3 \cos 2\left(x + \frac{\pi}{4}\right) - 1$$

