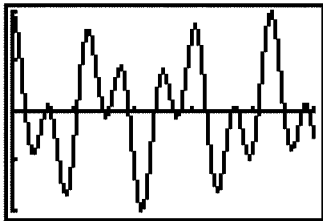


89 (a)  $f(t) = \cos(2\pi(697)t) + \cos(2\pi(1633)t) = \cos(1394\pi t) + \cos(3266\pi t)$

(b) 
$$f(t) = 2 \cos\left(\frac{1394\pi t + 3266\pi t}{2}\right) \cos\left(\frac{1394\pi t - 3266\pi t}{2}\right)$$
$$= 2 \cos(2330\pi t) \cos(-936\pi t)$$
$$= 2 \cos(2330\pi t) \cos(936\pi t)$$

(c) Graph  $Y_1 = 2 \cos(2330\pi X) \cos(936\pi X)$  in  $[0, 0.005, 0.001]$  by  $[-2, 2, 1]$ . See *Figure 89*.

$[0, 0.005, 0.001]$  by  $[-2, 2, 1]$



*Figure 89*