

47  $4 \sin 2x = 4(2 \sin x \cos x) = 8 \sin x \cos x$

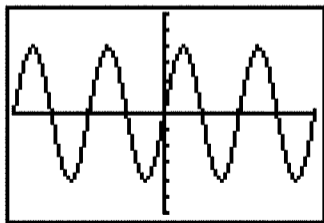
Graph  $Y_1 = 4 \sin(2X)$  and  $Y_2 = 8 \sin(X) \cos(X)$  in  $[-2\pi, 2\pi, \pi/2]$  by  $[-6, 6, 1]$ .

Graph  $Y_1$  is shown in *Figure 47a*. Graph  $Y_2$  is shown in *Figure 47b*. The graphs are the same.

Table  $Y_1 = 4 \sin(2X)$  and  $Y_2 = 8 \sin(X) \cos(X)$  starting at  $x = 0$ , incrementing by  $\frac{\pi}{6}$ .

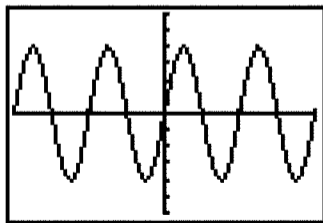
The tables are the same. See *Figure 47c*.

$[-2\pi, 2\pi, \pi/2]$  by  $[-6, 6, 1]$



*Figure 47a*

$[-2\pi, 2\pi, \pi/2]$  by  $[-6, 6, 1]$



*Figure 47b*

X	Y1	Y2
0	0	0
.5236	3.4641	3.4641
1.0472	3.4641	3.4641
1.5708	0	0
2.0944	-3.464	-3.464
2.618	-3.464	-3.464
3.1416	0	0

$Y_1 = 4 \sin(2X)$

*Figure 47c*