

# Exploring Trigonometry

Imagine you are new to math functions such as sine and cosine. To understand how they behave, you need to see them plotted. Most textbooks will show a sine and cosine curve (or many) but they cannot show you any variant on the standard trig formula that you can think of.

## Try This Activity:-

Click on  $y=\sin x$  and then click on the graph button.

Then click on  $y=\cos x$  and click the Over button. See how easy it is to compare two equations.

## Then..

Click on  $y=2\sin x$  followed by the Graph button.

Now click on  $y=\sin 2x$  followed by the Over button.

## A more complicated example..

The textbook says that  $8\sin x(\cos x)^3 - 4\sin x \cos x$  is the same as  $\sin 4x$  . Is it?

To test if it is true, click on one and Graph it, then click on the other and Over(lay) it.