

The Graphs of $y = \sin(x \pm h)$ and $y = \sin x \pm k$

Make sure your graph is in RADIAN MODE

Use the following WINDOW: $x : [0, 2\pi]$ $y : [-5, 5]$

Graph $Y_1 = \sin x$ and leave this in Y_1

Part 1 In Y_2 graph $y = \sin x \pm k$ for different values of k .

Summarize what the value of k does to the graph of $y = \sin x$.

Part 2 Use this window: $x : [0, 2\pi]$ $y : [-1, 1]$

In Y_2 graph $y = \sin(x \pm h)$ for different values of h .

Summarize what the value of h does to the graph of $y = \sin x$.

Without graphing describe the transformations of the Parent Function $y = \sin x$ each equation represents.

1. $y = 6\sin\left(x + \frac{\pi}{3}\right) - 1$

2. $y = -4\sin 3x + 5$