

# Intro to Analysis

## Trig Graphing Overview

Name \_\_\_\_\_

For the following questions, graph the group of functions in the provided window. We will be looking at the general function  $y = A \sin(B(X-C))+D$  (Why aren't we looking at the cosine function as well?) Make sure your calculator is in the **Radians** mode.

1. Use a domain of  $[-\pi, 2\pi]$  and a range of  $[-5, 5]$

$$Y1 = \sin(X) \text{ (make darker)}$$

**How does the "A" value change the graph?**

$$Y2 = 2 \sin(X)$$

$$Y3 = 5 \sin(X)$$

$$Y4 = 0.5 \sin(X)$$

Changes:

Stays the Same:

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2. Domain:  $[-\pi, 2\pi]$

Range:  $[-1.5, 1.5]$

$$Y1 = \sin(X) \text{ (make darker)}$$

**How does the "B" value change the graph?**

$$Y2 = \sin(2X)$$

$$Y3 = \sin(3X)$$

$$Y4 = \sin(0.4X)$$

Changes:

Stays the Same:

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3. Domain:  $[-\pi, 2\pi]$

Range:  $[-1.5, 1.5]$

$$Y1 = \sin(X) \text{ (make darker)}$$

**How does the "C" value change the graph?**

$$Y2 = \sin(X + \pi/4)$$

$$Y3 = \sin(X - \pi/6)$$

$$Y4 = \sin(X - 2\pi)$$

Changes:

Stays the Same:

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4. Domain:  $[-\pi, 2\pi]$

Range:  $[-3, 3]$

$$Y1 = \sin(X) \text{ (make darker)}$$

**How does the "D" value change the graph?**

$$Y2 = \sin(X) + 1$$

$$Y3 = \sin(X) - 0.75$$

$$Y4 = \sin(X) + 3$$

Changes:

Stays the Same: