

## Today's Learning Goal(s):

Date: May 16/18

By the end of the class, I will be able to:

- a) determine how each transformation affects the sine and cosine curves.

### Show Level 4 Exemplars

Last day's work: pp. 363-364 #1 – 4, 8, 9 [15,16]  
pp. 370-372 #1 – 8, 13 [15]

Today's Homework Practice includes:

- pp. 377-378 A – U
- p. 379 #1 – 3

## 6.4 Exploring Transformations of Sinusoidal Functions

**EXPLORE the Math:** pp. 377-378 A-U

Date: May 16/18

Part 1: The Graphs of  $y = a \sin x$  and  $y = a \cos x$ .

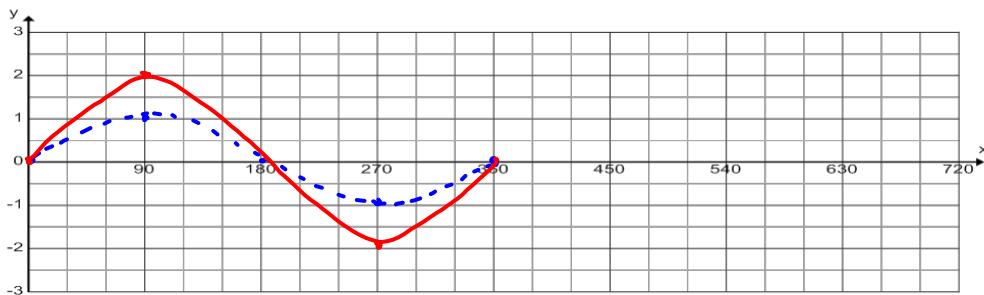
**Start with the 5 Key Points from the parent function.**

You may choose to add a few more for accuracy.

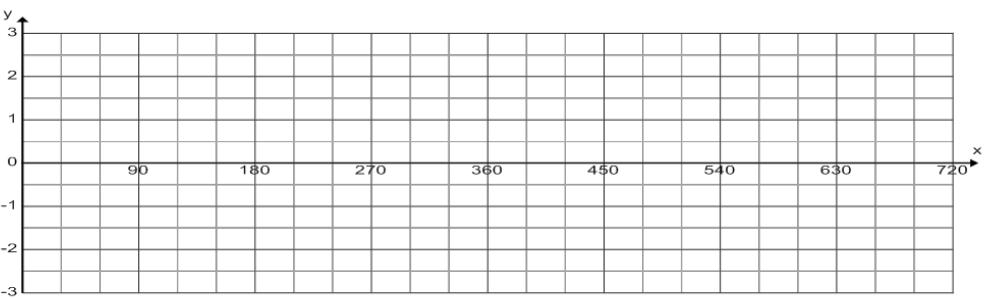
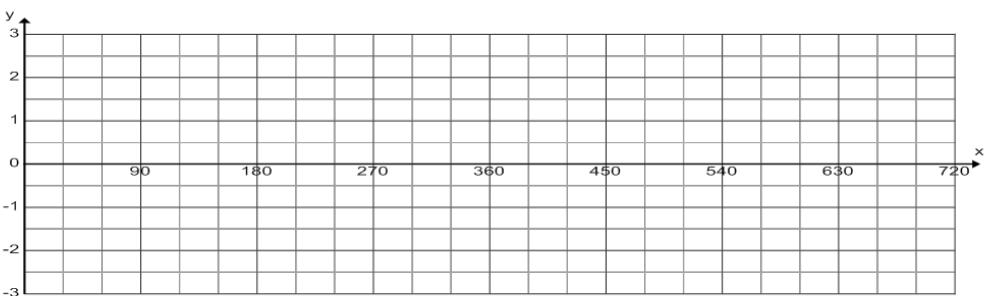
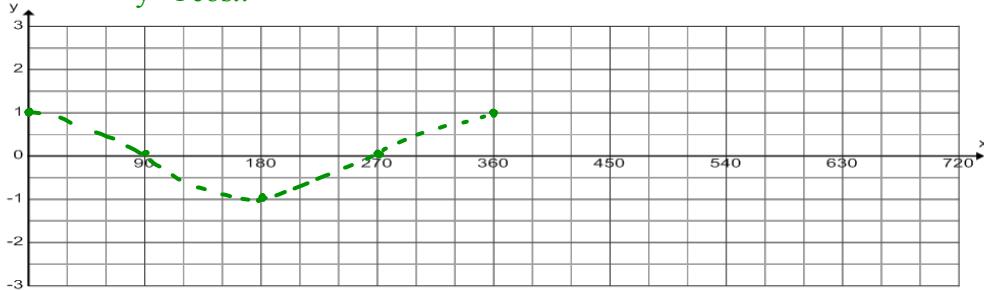
Note: Only 1 complete cycle is required.

$$y=1 \sin x$$

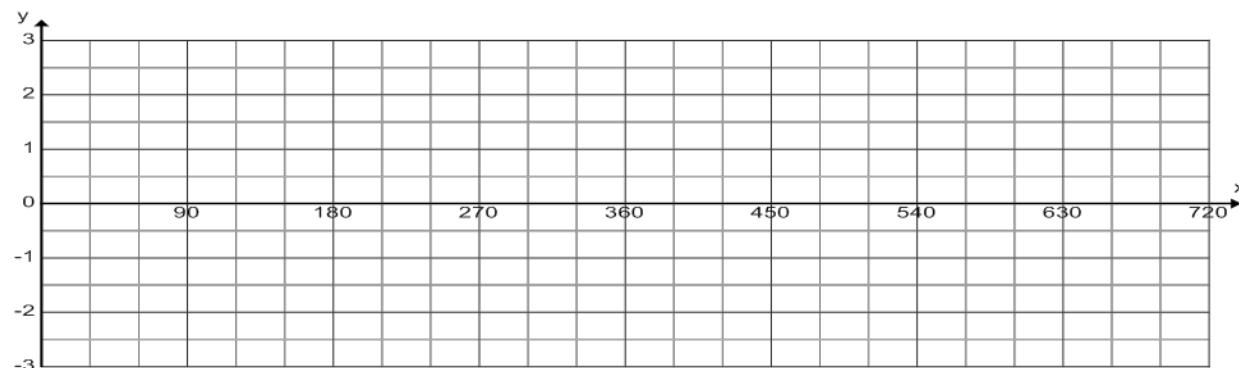
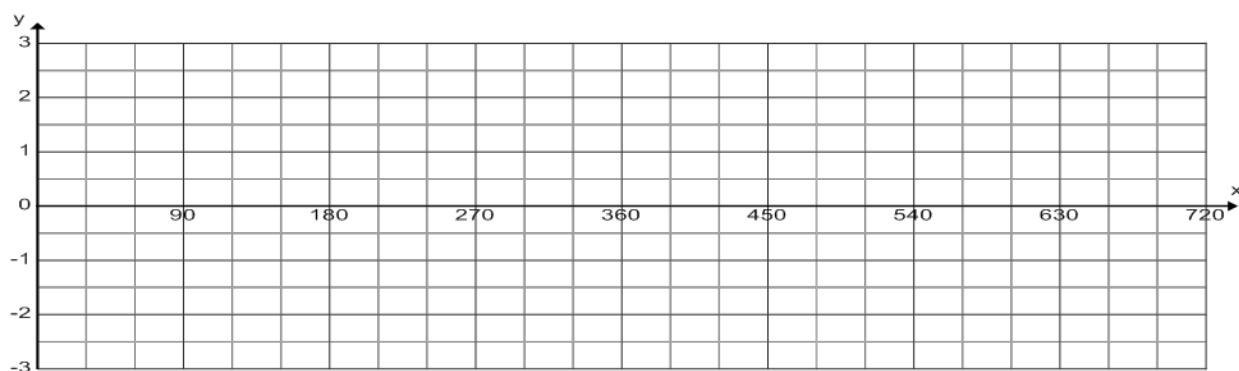
$$y=2 \sin x$$



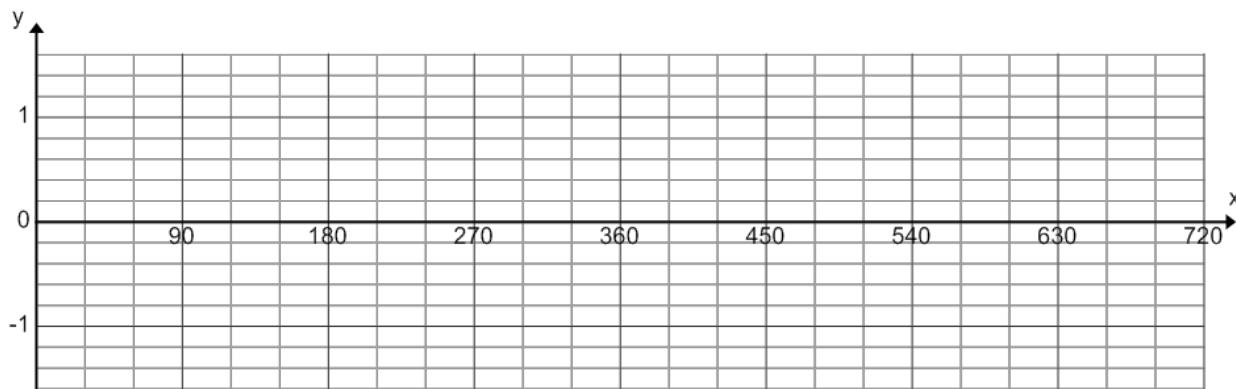
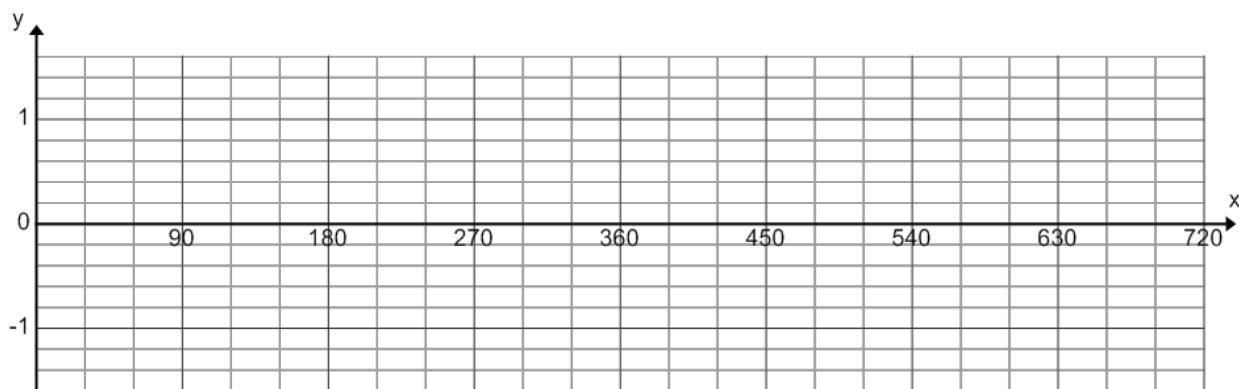
$$y=1 \cos x$$



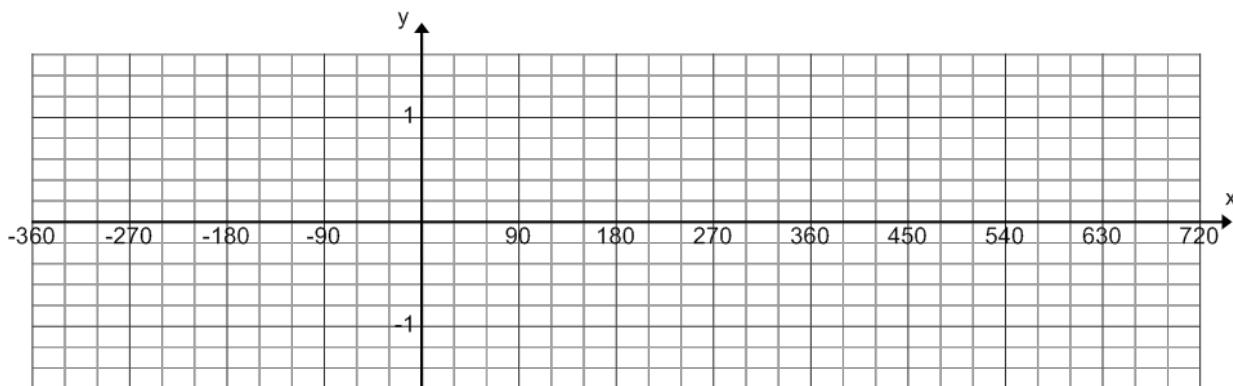
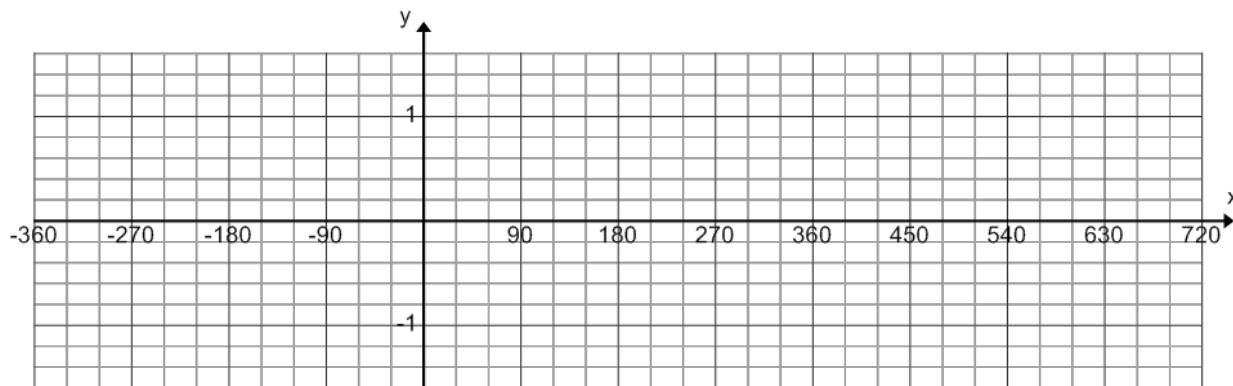
Part 2: The Graphs of  $y = \sin x + c$  and  $y = \cos x + c$ .



Part 3: The Graphs of  $y = \sin kx$  and  $y = \cos kx$ .



Part 4: The Graphs of  $y = \sin(x - d)$  and  $y = \cos(x - d)$ .



Summary of  $y = a \sin(k(x - d)) + c$  and  $y = a \cos(k(x - d)) + c$

The transformations that have occurred to  $y = \sin x$  and  $y = \cos x$  are:

$$y = a f(k(x-d)) + c$$


**Are there any Homework Questions you would like to see on the board?**

Last day's work: pp. 363-364 #1 – 4, 8, 9 [15,16]  
pp. 370-372 #1 – 8, 13 [15]

Today's Homework Practice includes:

pp. 377-378 A – U  
p. 379 #1 – 3

## Attachments

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6.2 SineTracer.gsp