

Today's Learning Goal(s):

Date: _____

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

- a) sketch sinusoidal functions using transformations.

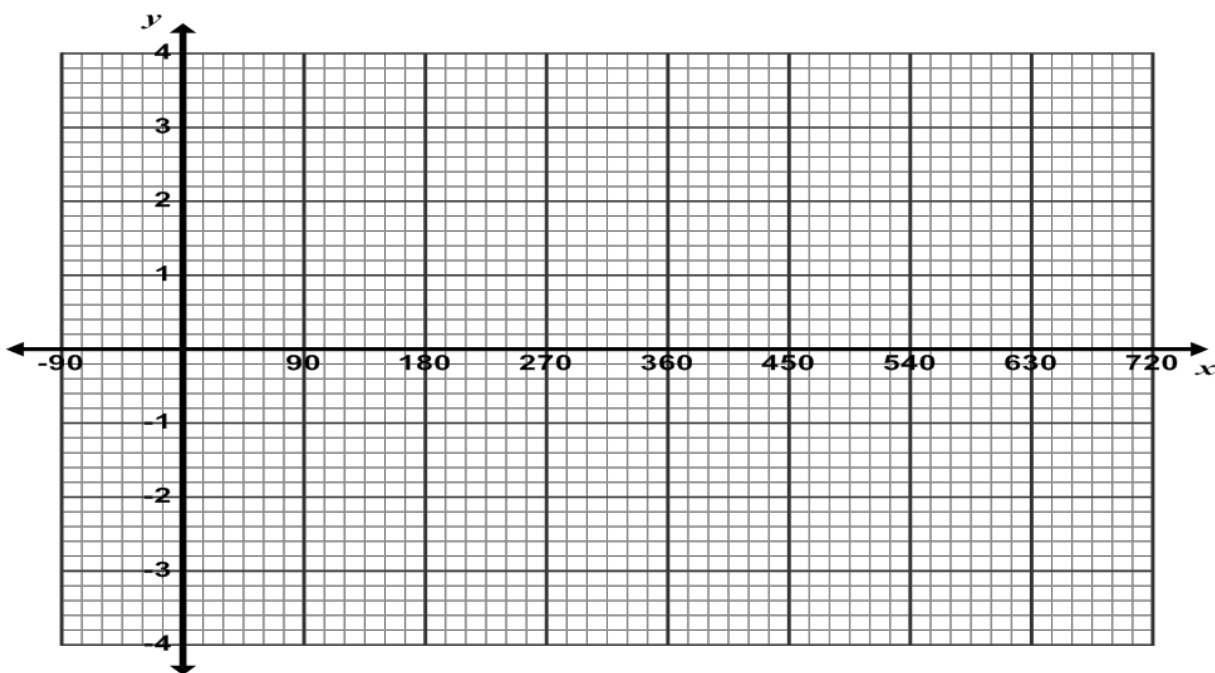
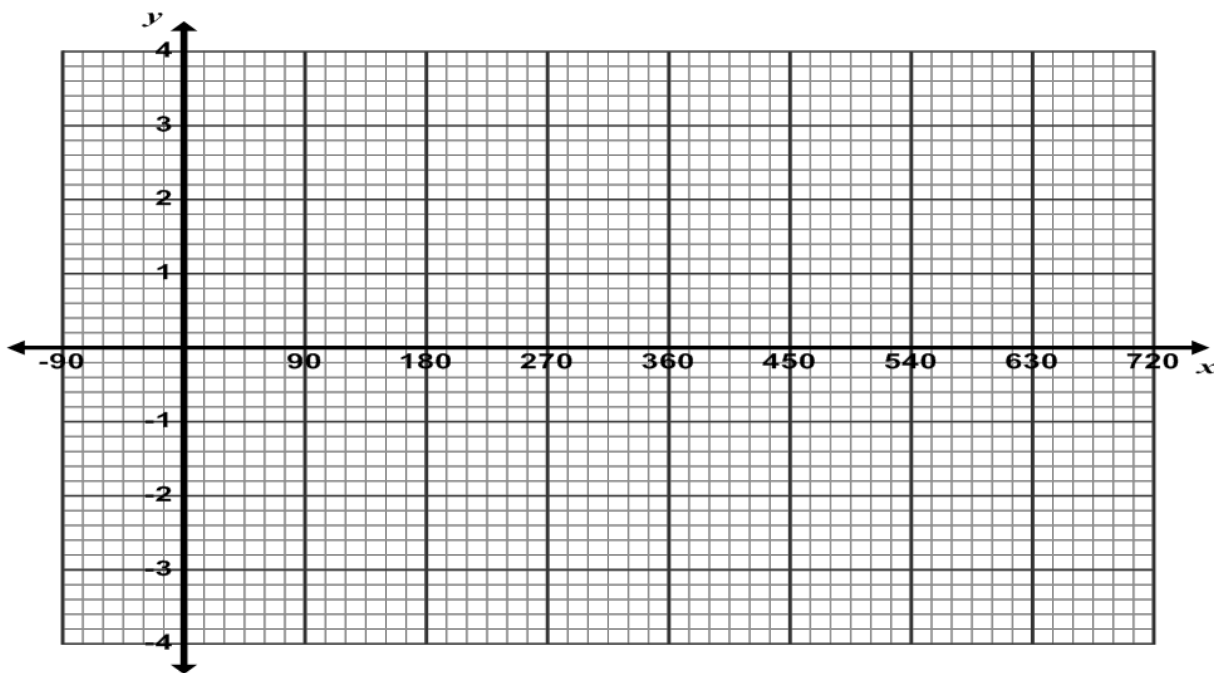
Last day's work: pp. 377-378 A – U
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6.5 Using Transformations to Sketch Sinusoidal Functions Day1

Date: _____

Ex. 1 Sketch (one cycle) for:

a) $y = \sin x$ b) $y = 3 \sin x$ c) $y = 3 \sin(2x)$ d) $y = 3 \sin(2(x - 30^\circ))$



Ex. 2 Graph $y = 2\cos(3(x - 15^\circ)) - 2$

amplitude:

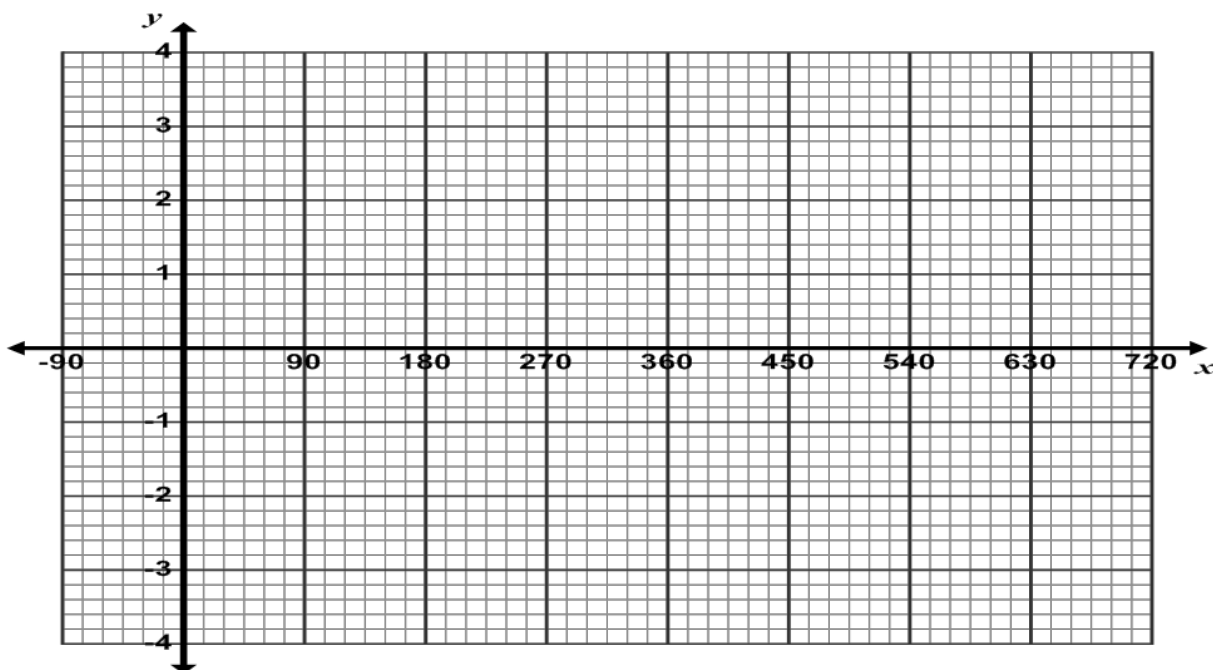
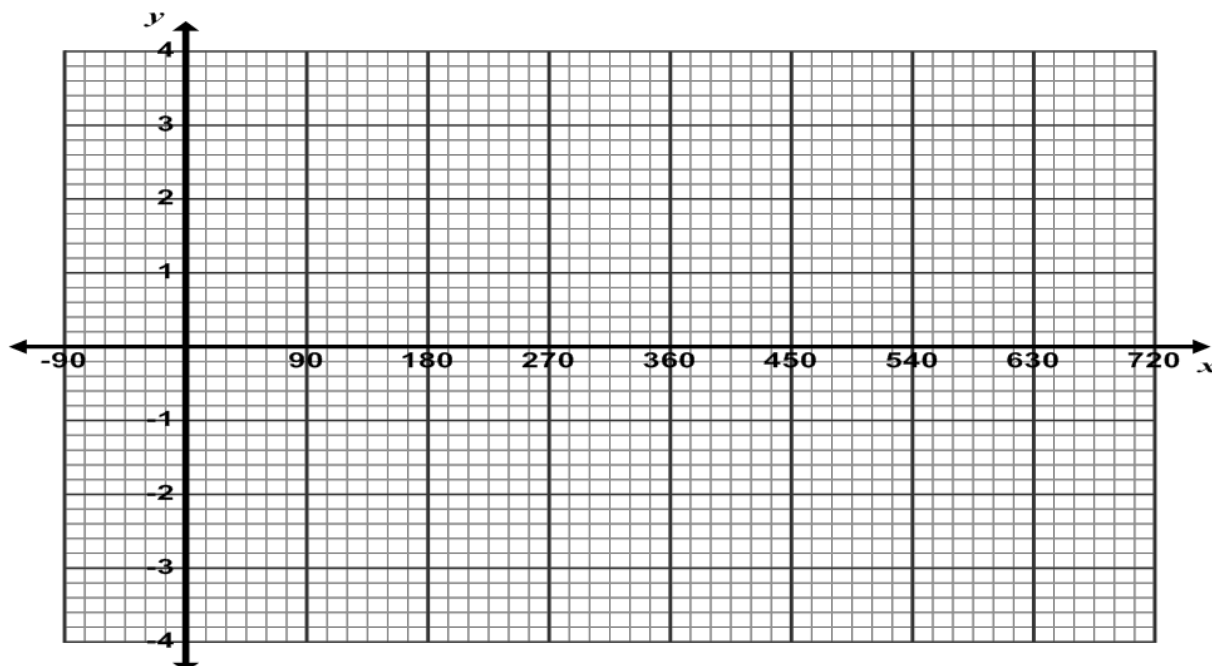
period:

phase shift:
p.381

vertical shift:

equation of the axis:

range:



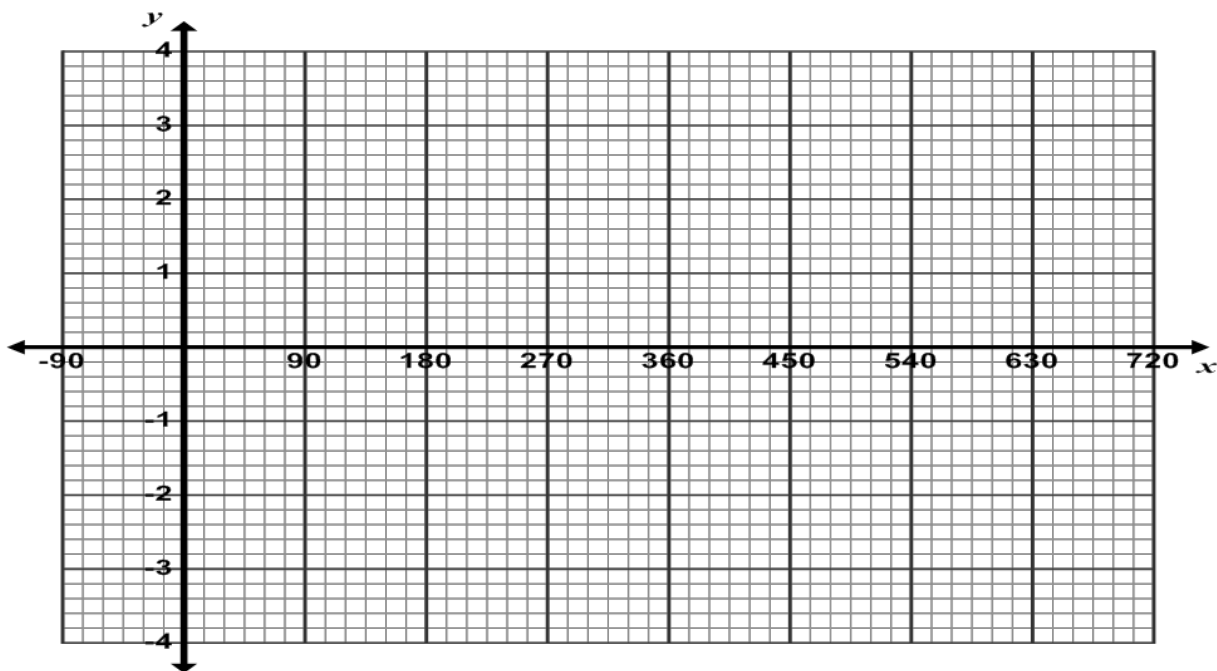
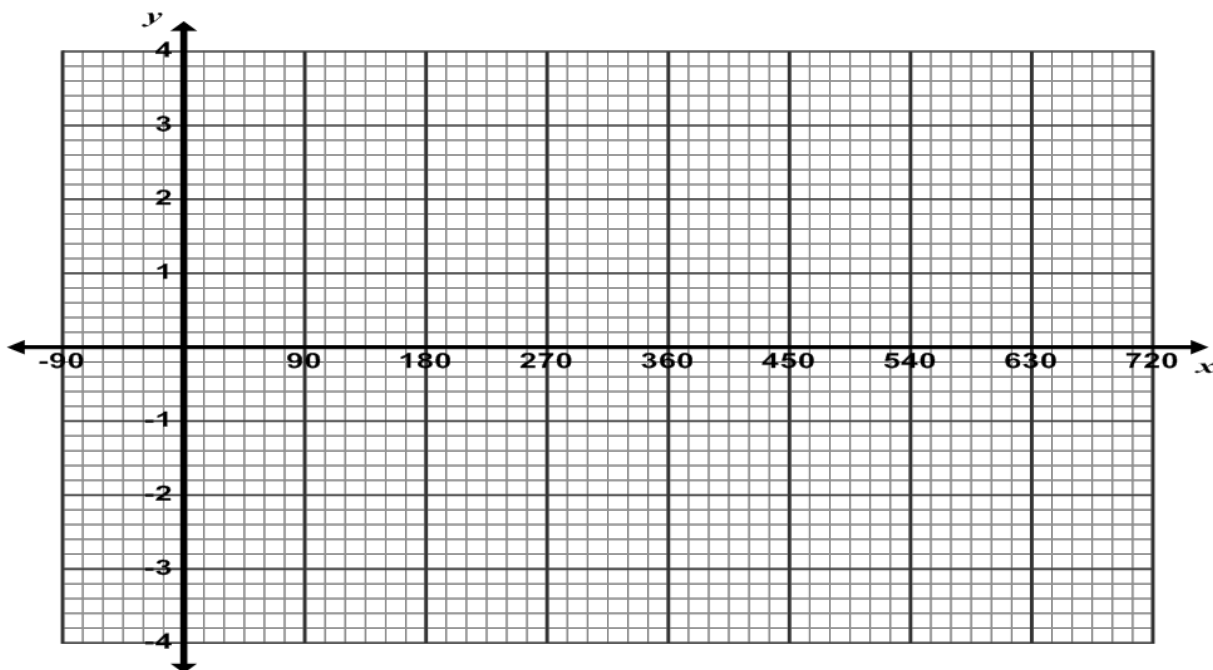
Ex. 3 Graph $y = -\cos(\frac{1}{2}x + 30^\circ) + 2$

amplitude:

period:

phase shift:

vertical shift:



General Sinusoidal Functions

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

- the amplitude is a
- the horizontal stretch/compression is $\frac{1}{|k|}$
resulting in a period of $\frac{360^\circ}{|k|}$
- the vertical shift is c units.
- the phase shift is d units.



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

Last day's work: pp. 377-378 A – U
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Today's Homework Practice includes:

pp. 383-385 #1 – 4 [12]

Sketch #3 by hand

Work Ahead p. 384 #7abc

6.2 SineTracer.gsp