

10.2

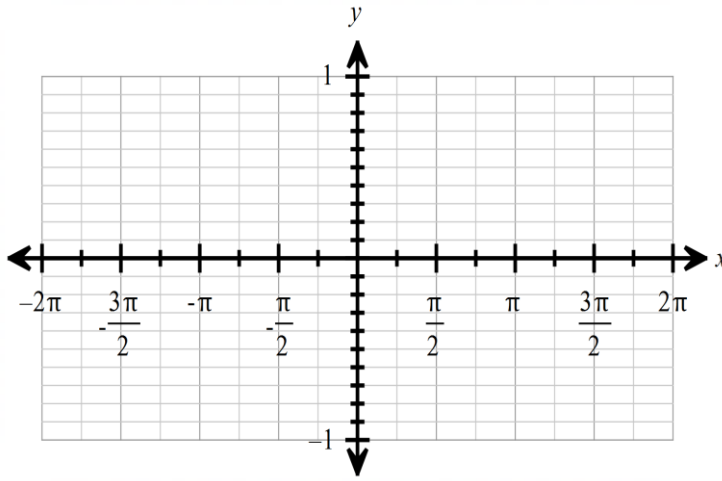
Date:

Objective:

A. Graph Sine and Cosine

Parent sine graph $f(\theta) = \sin \theta$

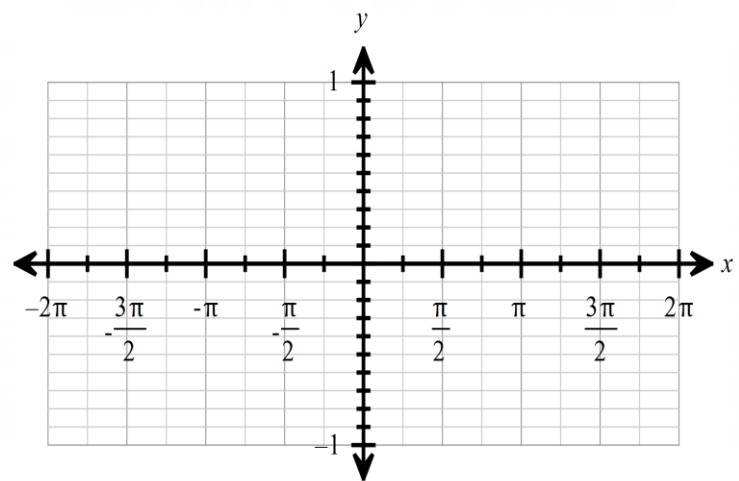
Draw the graph and make a table.



θ					
$y = \sin \theta$					

Parent cosine graph $f(\theta) = \cos \theta$

Draw the graph and make a table.



θ					
$y = \cos \theta$					

B. Transformations

- From the 4 transformations in 9.1, today we are discussing _____ and _____.
- What is the general equation for a trigonometric function? _____

Phase shift and Period:

Phase Shift =

Period=

- Which variable in the equation is related to a *horizontal shift*? _____
 - In the parent graph this is: _____
- Which variable in the equation is related to a *horizontal stretch*? _____
 - In the parent graph this is: _____
 - This is used to find the period. The formula for *period* is: _____
 - The *period* in the parent graph is _____
- Frequency* is defined as the number of oscillations or rotations per unit of time.
 - Frequency* is the reciprocal of the period. The formula for *frequency* is _____
 - The *frequency* in the parent graph is _____

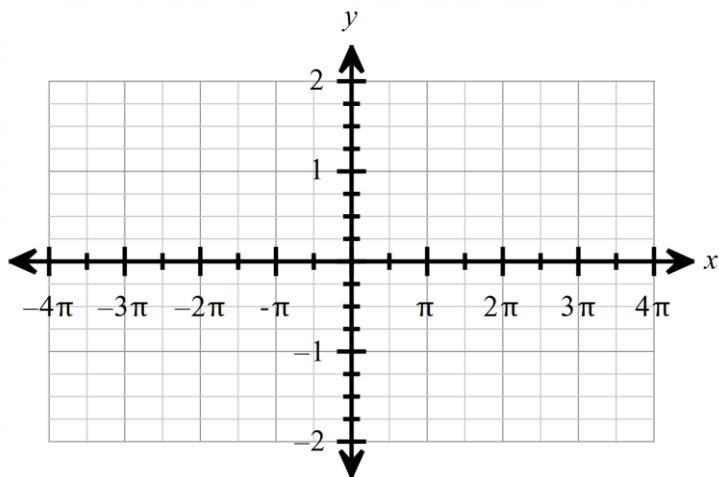
D. Making the Graph. (Phase Shift and Period)

EX. 1) $f(\theta) = \sin(\theta + \pi)$ c: _____

Phase Shift: _____ b: _____ Period: _____ Freq.: _____

Transformations:

θ					
$y = \sin \theta$					

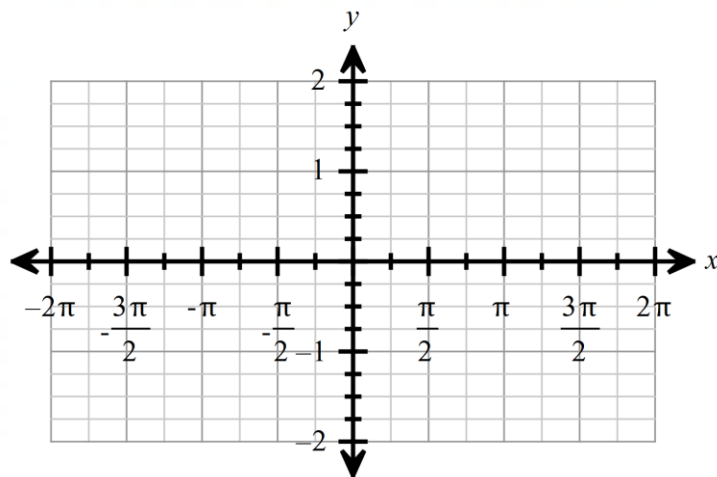


EX. 2) $f(\theta) = \cos\left(\theta - \frac{\pi}{4}\right)$ c: _____

Phase Shift: _____ b: _____ Period: _____ Freq.: _____

Transformations:

θ					
$y = \cos \theta$					

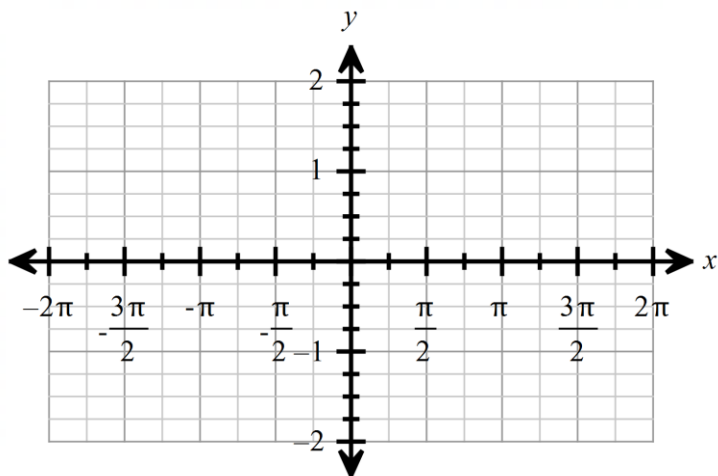


EX. 3) $f(\theta) = \cos 2\theta$ c: _____

Phase Shift: _____ b: _____ Period: _____ Freq.: _____

Transformations:

θ					
$y = \cos \theta$					

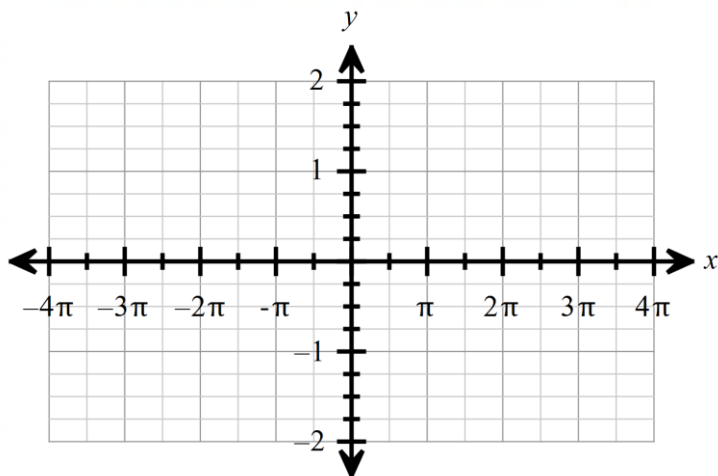


EX. 4) $f(\theta) = \sin\left(\frac{\theta}{4}\right)$ c: _____

Phase Shift: _____ b: _____ Period: _____ Freq.: _____

Transformations:

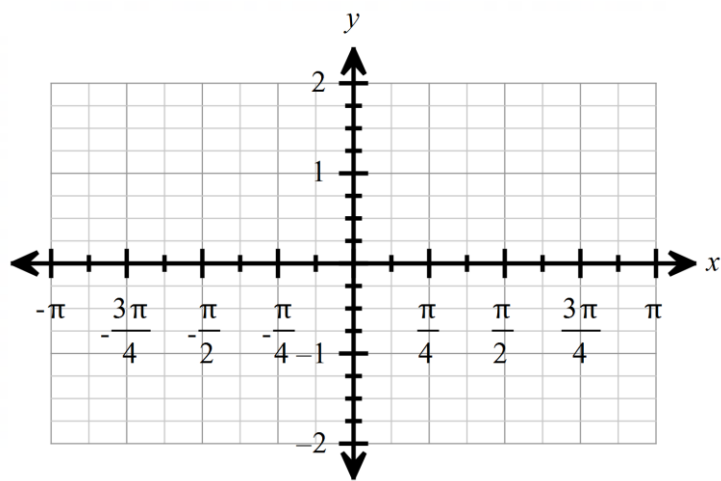
θ					
$y = \sin \theta$					



EX. 5) $f(\theta) = -\sin(2(\theta - \pi))$ c: _____
 Phase Shift: _____ b: _____ Period: _____ Freq.: _____

Transformations:

θ					
$y = \sin \theta$					



EX. 6) $f(\theta) = \cos 3\left(\theta + \frac{\pi}{3}\right)$ c: _____
 Phase Shift: _____ b: _____ Period: _____ Freq.: _____

Transformations:

θ					
$y = \cos \theta$					

