

10.1

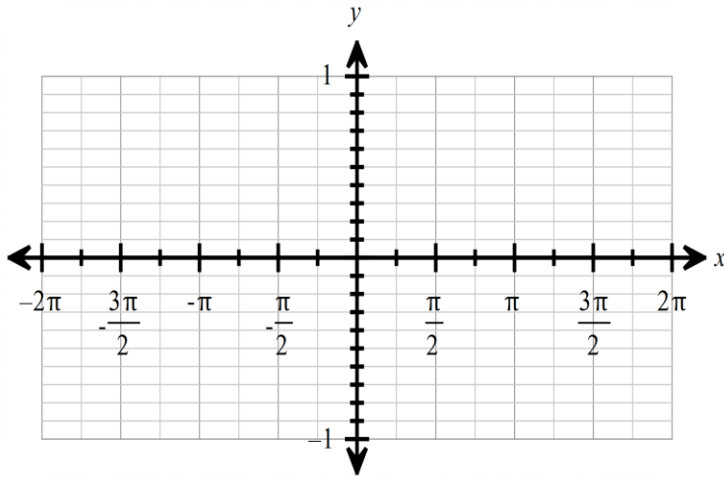
Date:

Objective:

A. Graph Sine and Cosine

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

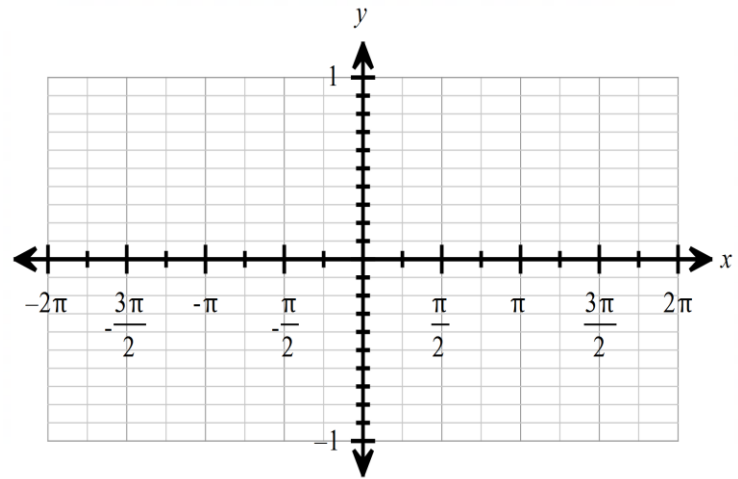
Draw the graph and make a table.



θ					
$y = \sin \theta$					

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

Draw the graph and make a table.



θ					
$y = \cos \theta$					

B. Transformations

1. What are the 4 types of transformations?

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-
-
-

2. What is the general equation for a trigonometric function? _____

Amplitude and Vertical Shift:

$|A| =$

Vertical Shift =

4. Which part of the equation corresponds with a *vertical stretch* (dilation)? _____

- In the parent graph this is: _____.

5. Which part of the equation corresponds with a *vertical shift* (translate up or down)? _____

- In the parent graph this is: _____.

6. The **midline** of the graphs of $\sin \theta$ and $\cos \theta$ divide the graph in half *horizontally*.

- The midline of the of the parent graphs is: _____

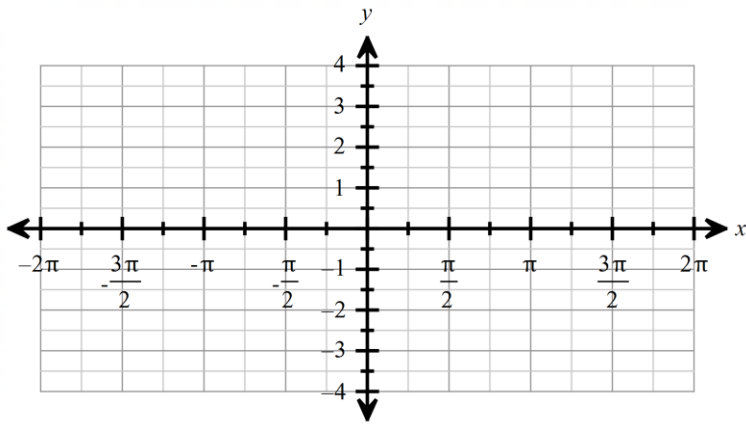
C. Making the Graph (Amplitude, Midline, Vertical Shift and Reflections)

EX. 1) $f(\theta) = \sin \theta - 2$ $a = \underline{\hspace{2cm}}$ $d = \underline{\hspace{2cm}}$

Midline $\underline{\hspace{2cm}}$ Amplitude $\underline{\hspace{2cm}}$ Vertical Shift $\underline{\hspace{2cm}}$

θ					
$y = \sin \theta$					

Transformations:

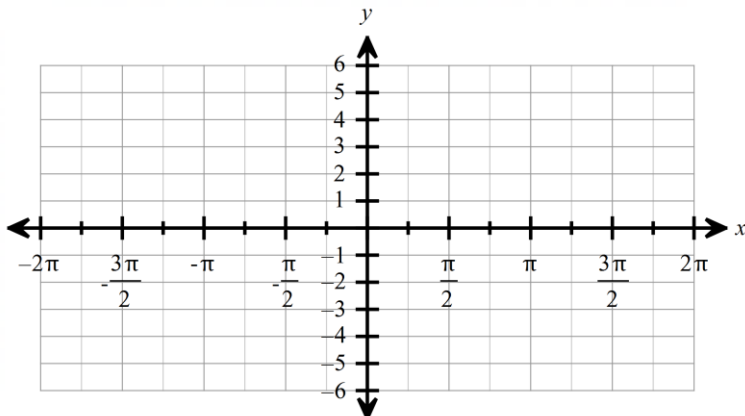


EX. 3) $f(\theta) = -5 \sin \theta$ $a = \underline{\hspace{2cm}}$ $d = \underline{\hspace{2cm}}$

Midline $\underline{\hspace{2cm}}$ Amplitude $\underline{\hspace{2cm}}$ Vertical Shift $\underline{\hspace{2cm}}$

θ					
$y = \sin \theta$					

Transformations:

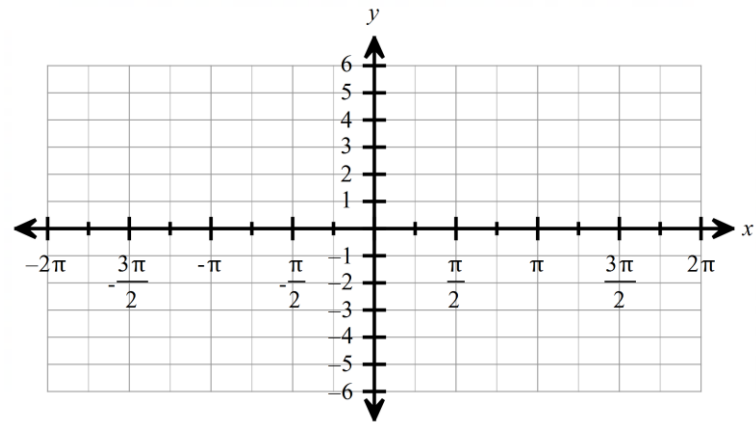


EX. 2) $f(\theta) = \cos \theta + 4$ $a = \underline{\hspace{2cm}}$ $d = \underline{\hspace{2cm}}$

Midline $\underline{\hspace{2cm}}$ Amplitude $\underline{\hspace{2cm}}$ Vertical Shift $\underline{\hspace{2cm}}$

θ					
$y = \cos \theta$					

Transformations:



EX. 4) $f(\theta) = -3 - 2 \cos \theta$ $a = \underline{\hspace{2cm}}$ $d = \underline{\hspace{2cm}}$

Midline $\underline{\hspace{2cm}}$ Amplitude $\underline{\hspace{2cm}}$ Vertical Shift $\underline{\hspace{2cm}}$

θ					
$y = \cos \theta$					

Transformations:

