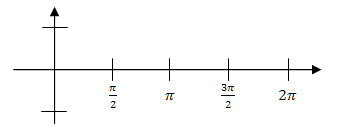
**Unit 8: Graphs of Trigonometric Functions** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ѳ** | **cos(Ѳ)** |  | **Ѳ** | **sin(Ѳ)** |
| 0 |  |  | 0 |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
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|  |  |  |  |  |

Graph of “Cosine”

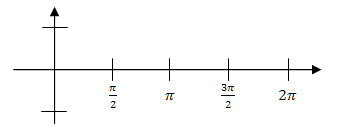


1

0.5

-0.5

-1



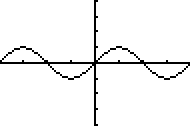
1

0.5

-0.5

-1

Graph of “Sine”



**Graphing in the Calculator:**

1. Calculator needs to be in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mode

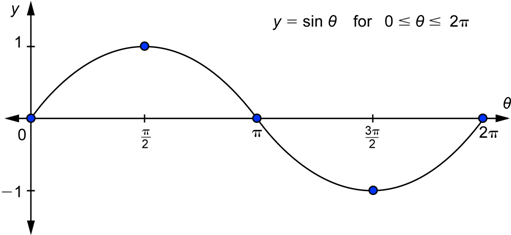
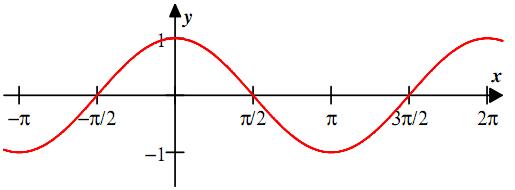
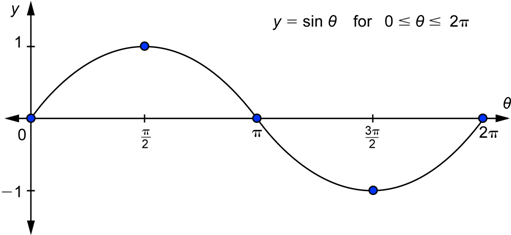
2. Use “x” for Ѳ

3. Zoom \_\_\_\_\_\_\_\_\_\_\_

**Transformations of sine & cosine**

Describe the transformations that took place, then sketch their graphs on the graph of the parent function below

a. b. c.

or

**Amplitude:** half the height of the graph

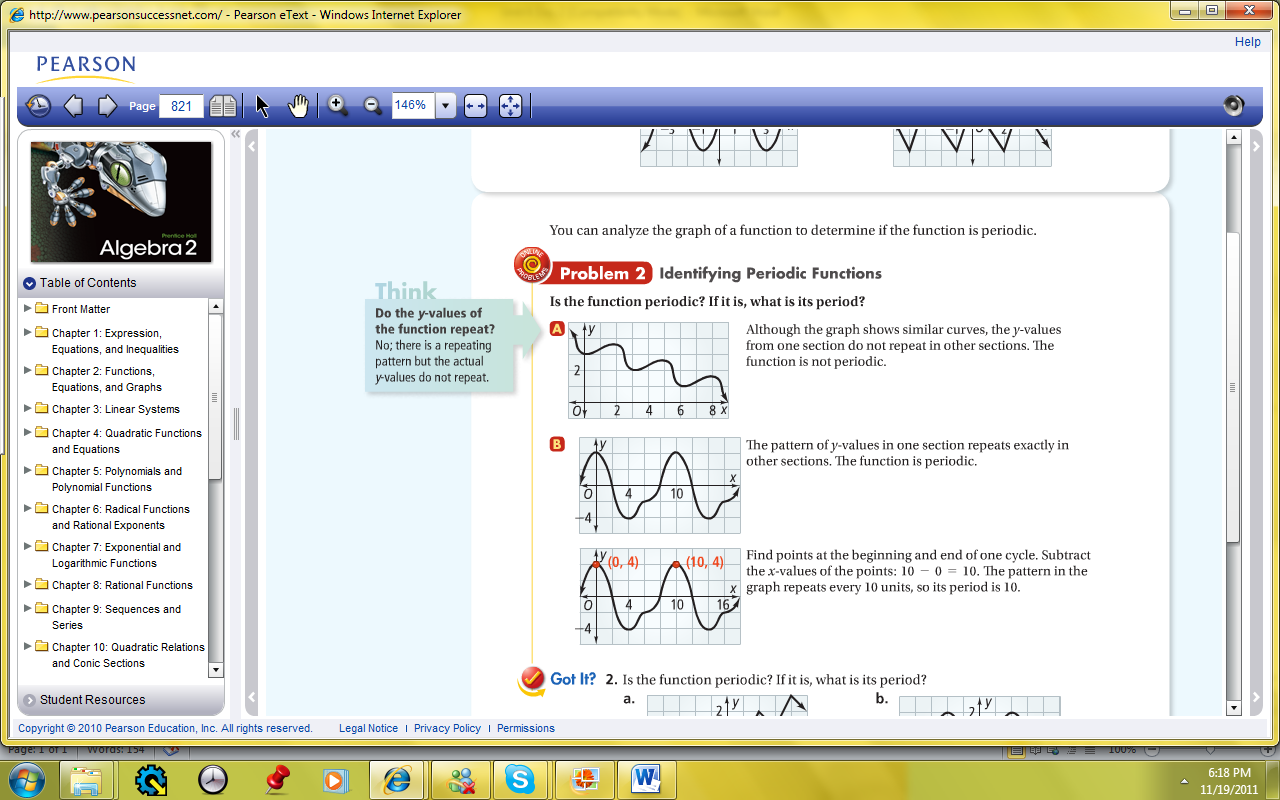
**Cycle:** One complete pattern in a graph

**Period:** How long it takes to complete a cycle

* \_\_\_\_\_\_ is the amplitude of the function
* \_\_\_\_\_\_ is the number of cycles in the interval from \_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_ is the period of the function.

**Example 1:** Find the period and amplitude of each function below

a. b. c.



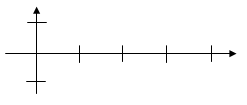
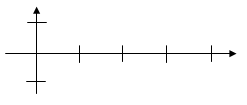
Amplitude: \_\_\_\_\_\_\_\_\_ Amplitude: \_\_\_\_\_\_\_\_\_ Amplitude: \_\_\_\_\_\_\_\_\_

Period: \_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| 1. Given: 2. What is the amplitude of the function?\_\_\_\_\_\_\_\_\_\_ 3. What is the period of this function?\_\_\_\_\_\_\_\_\_\_\_\_ | 1. Given: 2. What is the amplitude of the function?\_\_\_\_\_ 3. What is the period of this function?\_\_\_\_\_\_\_ |
| 1. Given: 2. What is the amplitude of the function?\_\_\_\_\_\_\_\_\_\_ 3. What is the period of this function?\_\_\_\_\_\_\_\_\_\_\_\_\_ | 1. Given: 2. What is the amplitude of the function?\_\_\_\_\_ 3. What is the period of this function?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**Example 2:** Write the function and sketch the curve of the sine function with the following description: amplitude of 2 and period of

**You Try:** Write the function and sketch the curve of the cosine function with the following description: amplitude of 4 and period of



1. Write sine function with the following description: Amplitude of 1 and period of
2. Write the cosine function with the following description: Amplitude of and period of 6