MHF4U

6.3 Exploring Graphs of the Primary Trigonometric Functions

A. Complete the following table with values of the trigonometric functions. Round each value to two decimal places.

α	$\sin\alpha$	$\cos\alpha$	$\tan\alpha$
$-\pi$			
$-\frac{5\pi}{6}$			
$-\frac{2\pi}{3}$			
$-\frac{\pi}{2}$			
$-\frac{\pi}{3}$			
$-\frac{\pi}{6}$			
0			
$\frac{\pi}{6}$			
$\frac{\pi}{3}$			
$\frac{\pi}{2}$			
$\frac{2\pi}{3}$			
$\frac{5\pi}{6}$			
π			
$\frac{7\pi}{6}$			
$\frac{4\pi}{3}$			
$\frac{3\pi}{2}$			
$\frac{5\pi}{3}$			
$\frac{11\pi}{6}$			
2π			

B. Use the table at part A to sketch the graph of all trigonometric functions on the grid provided on page 3.

C. Fill the following table (use the definitions given below).

	Sine Function	Cosine Function	Tangent Function
Domain			
Range			
Name of the Graph			
Odd or Even			
Amplitude			
Equation of the Axis			
Period			
x-intercepts Points			
Maximum Points			
Minimum Points			
Asymptotes			
Link			

D. Definitions

Amplitude = Half the vertical distance from the minimum value to the maximum value:

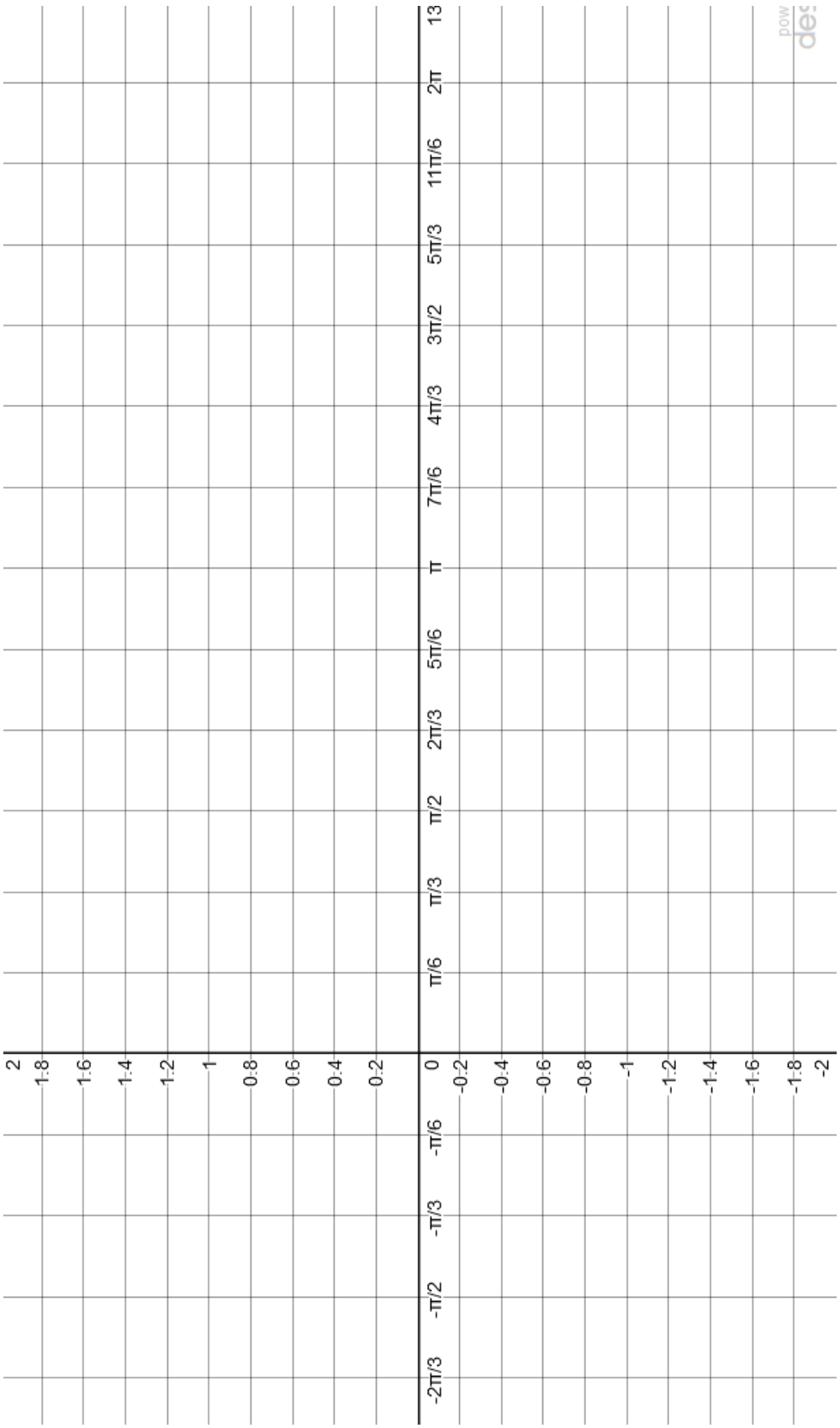
$$A = \frac{y_{\max} - y_{\min}}{2}$$

Axis = horizontal line midway from minimum and maximum values:

$$y_{axis} = \frac{y_{\max} + y_{\min}}{2}$$

Cycle = A set of consecutive points on the graph that are repeated

Period = The horizontal length of one cycle



Reading: Nelson Textbook, Pages 333-336
Homework: Nelson Textbook, Page 330: #1