**5.1 – GRAPHING SINE AND COSINE FUNCTIONS**

The graphs of $y=cos x$ and $y = sin x$ look a lot alike.

They are both sinusoidal curves with a period $2π$.

Sinusoidal means that the curve oscillates repeatedly up and down from a centre line.

A period is the number of units every which the graph repeats itself exactly.

 

**I – Graph of** $y=\sin(x)$**.**



To reproduce this graph, you need to learn the characteristics of the graph over 1 period :



Max : $1$ Min : $-1$

Amplitude :$ 1$

Period $2π$ or $360^{o}$

$y-$intercept : $0$

$x-$intercepts : $0, π, 2π$ (on the cycle showed)

Domain : $R$ Range : $\left[-1,1\right]$

**II – Graph of** $y=\cos(x)$**.**



To reproduce this graph, you need to learn the characteristics of the graph over 1 period:

Max : $1$ Min : $-1$

Amplitude :$ 1$

Period $2π$ or $360^{o}$

$y-$intercept : $1$

$x-$intercepts : $\frac{π}{2},\frac{3π}{2}$ (on the cycle showed)

Domain : $R$ Range : $\left[-1,1\right]$



The two graphs are very similar. One is a horizontal translation of the other one.

 

**Hwk: p 233 # 1 – 11, 14, 15, 17, 20, 22 – 24.**