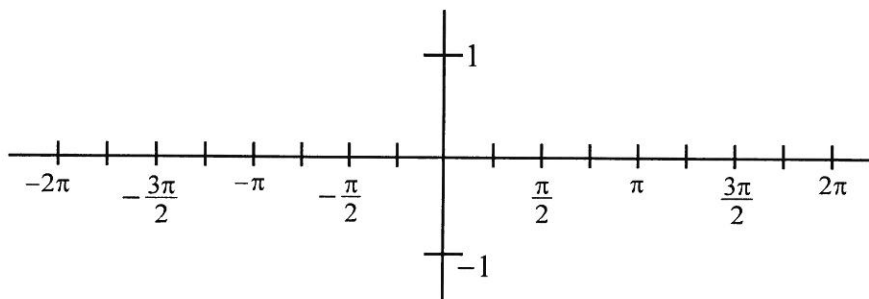**ALGEBRA 2H**
Section 13.4: Graphing Trigonometric Functions
NOTES - Part 1

I. **Graphing Trigonometric Functions**

1. Complete the table below and then use it to graph $y = \textbf{sinx}$.

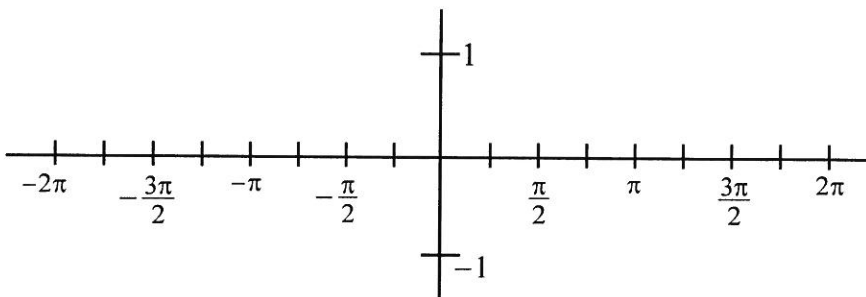| x	0	45° $\dfrac{\pi}{4}$	90° $\dfrac{\pi}{2}$	135° $\dfrac{3\pi}{4}$	180° π	225° $\dfrac{5\pi}{4}$	270° $\dfrac{3\pi}{2}$	315° $\dfrac{7\pi}{4}$	360° 2π
y									

The amplitude of the graph is the maximum distance the graph reaches above the x-axis.

amplitude = _____

2. Complete the table below and then use it to graph $y = \textbf{cosx}$.

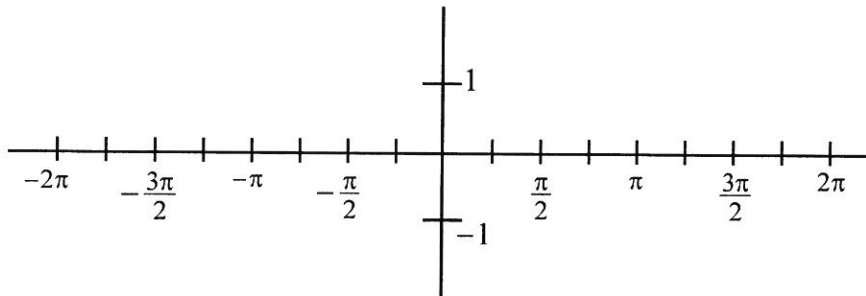| x	0	45° $\dfrac{\pi}{4}$	90° $\dfrac{\pi}{2}$	135° $\dfrac{3\pi}{4}$	180° π	225° $\dfrac{5\pi}{4}$	270° $\dfrac{3\pi}{2}$	315° $\dfrac{7\pi}{4}$	360° 2π
y									

The amplitude of the graph is the maximum distance the graph reaches above the x-axis.

amplitude = _____

3. Complete the table below and then use it to graph $y = \tan x$.

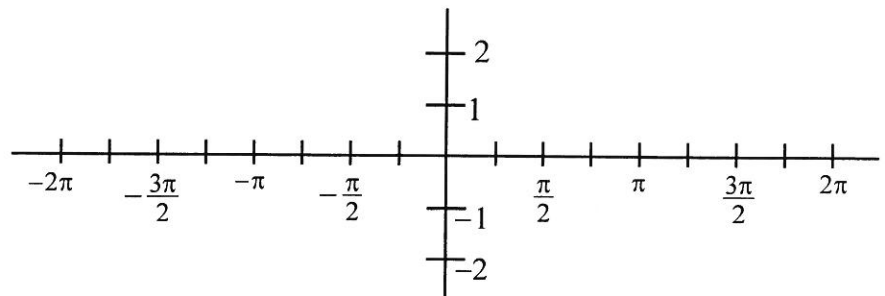| x	0	45° $\dfrac{\pi}{4}$	90° $\dfrac{\pi}{2}$	135° $\dfrac{3\pi}{4}$	180° π	225° $\dfrac{5\pi}{4}$	270° $\dfrac{3\pi}{2}$	315° $\dfrac{7\pi}{4}$	360° 2π
y									

The amplitude of the graph is the maximum distance the graph reaches above the x-axis.

amplitude = _____

4. If the trigonometric function is multiplied by a constant, the amplitude will be changed by that constant and the graph can be stretched vertically that amount. Graph the following.

(a) $y = 2\sin x$

amplitude = _____

(b) $y = \frac{1}{2}\cos x$

amplitude = _____