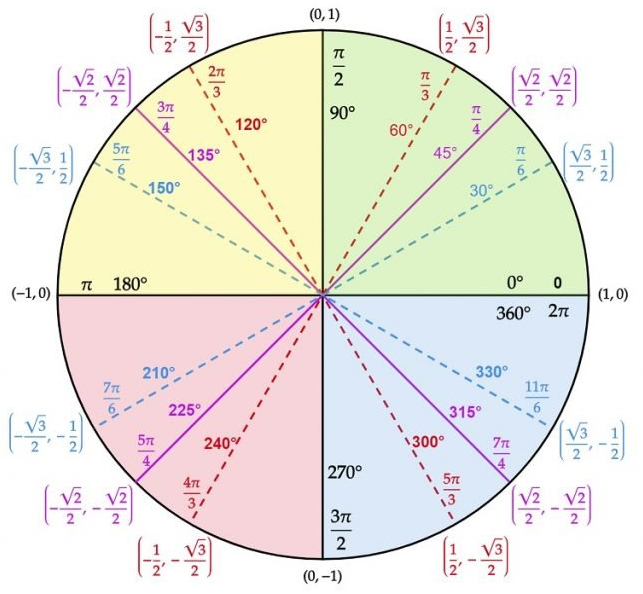
**Harold’s Trigonometry**

**“Cheat Sheet”**

18 January 2023

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Unit Circle** | | | **Trig Chart** | |
| https://netfiles.uiuc.edu/clow1/590NET/triangle_on_unit_circle.jpg?uniq=l9hkg | | | (Quadrant I only)   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Degrees** | **0°** | **30°** | **45°** | **60°** | **90°** | | Radians | 0 | /6 | /4 | /3 | /2 | | 🡪 |  |  |  |  |  | | 🡨 |  |  |  |  |  | | Pattern |  |  |  |  |  | | Tan Pattern |  |  |  |  | Und | | |
| **Graphical Representation Of The Six Trig Functions** | | | | |
| https://netfiles.uiuc.edu/clow1/590NET/CAST.jpg?uniq=-s9wwqmFile:Trigonometric functions.svg  π  π  **“A**ll **S**tudents **T**ake **C**alculus” | | | | |
| **The Six Trig “Levers”** | ***y = a sin (b (x - h)) + k*** | **Graphing Tips** | | **Notes** |
| 1. Move up/down ↕ | k (Vertical translation) |  | | If k = f(x) then x-axis is replaced by f(x)-axis |
| 1. Move left/right ↔ | h (Phase shift) | *‘+‘ shifts right* | |  |
| 1. Stretch up/down ↕ | a (Amplitude) |  | | a is NOT peak-to-peak on the y-axis |
| 1. Stretch left/right ↔ | b (Frequency 2) |  | | T = peak-to-peak on the -axis  for and |
| 1. Flip about y-axis ⭯ | b → –b | *f(x) → f(-x)* | | Even Function: |
| 1. Flip about x-axis ⭮ | a → –a | *f(x) → –f(x)* | | Odd Function: |

|  |  |
| --- | --- |
| **Unit Circle** | |
|  |  |



**Source**: Unit Circle Quick Lesson - Matter of Math

<https://matterofmath.com/trigonometry/unit-circle/>