

SINUSOID GRAPHING SUMMARY

Definitions:

Inverted Wave flipped on the x-axis

Amplified Wave the wave height of the wave is increased / decreased

Vertical Shift Wave wave shifted up or down the y-axis

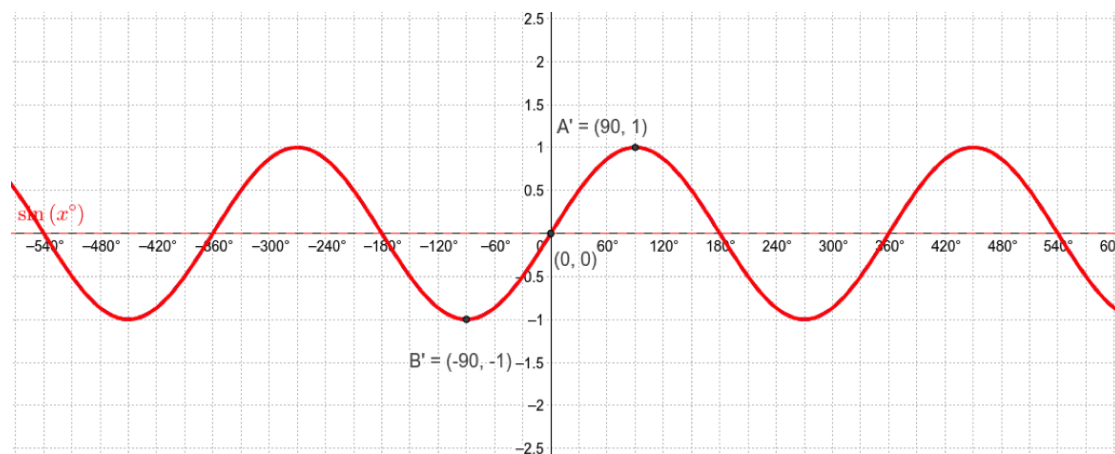
Period Shift the wave does not repeat at 360 interval

Phase Shift the starting point (0 for sin, 1 for cos) is shifted on x-axis

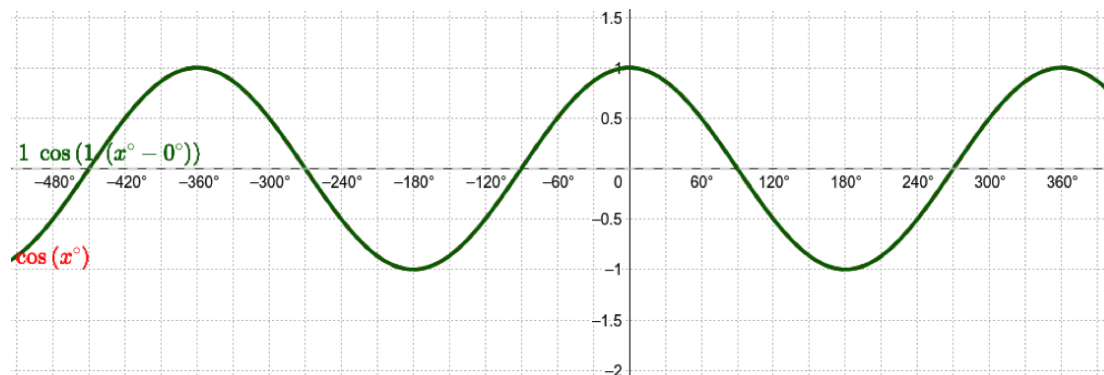
Radians different way to measure angles. 2π radians = 360° . $\sin(\pi/4) = \sin(180/45) = \sin(45)$

$\sin\theta$ and $\cos\theta$

Sine Wave goes through (0,0) going up



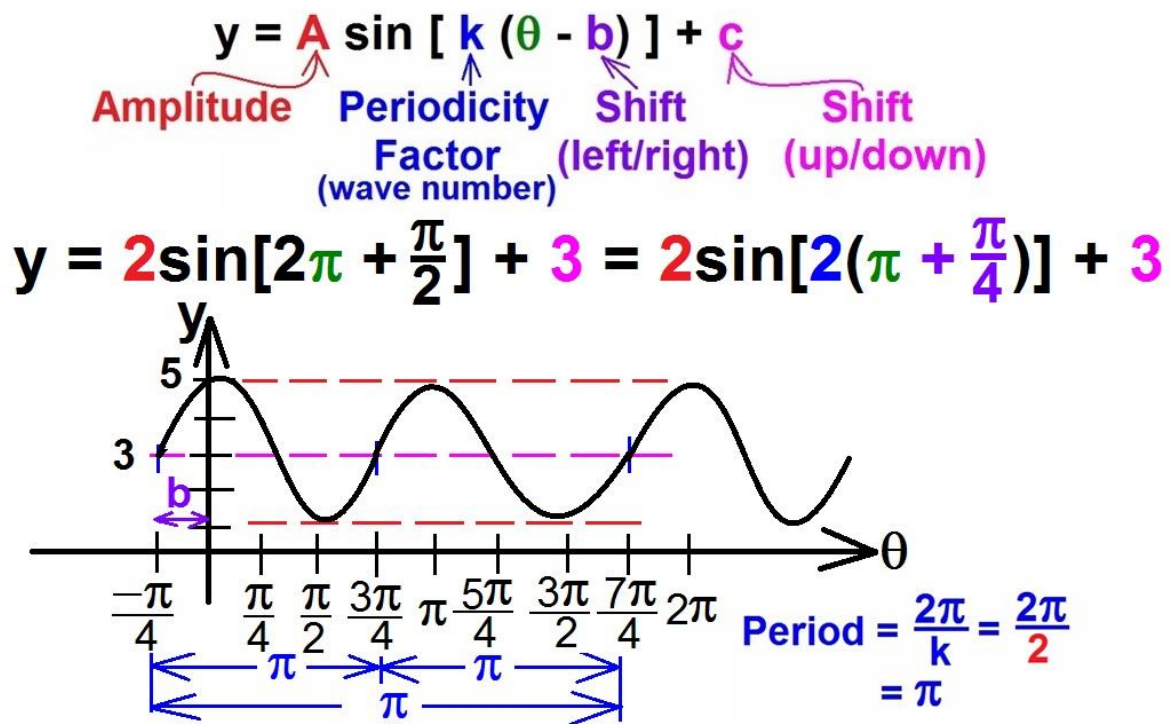
Cos Wave starts at 1



Graphing Transformation

Note: factor out x so that it does not have a coefficient

Note 2: for phase shift you want θ so that the inside bracket equals 0 to identify start of wave



Graphing Example

Sketch the graph of $y = -10 + 2 \sin 3(x - 45^\circ)$.

