Warm-up

1. Find the amplitude, period and frequency for the following:

Y = 3 sin|x

Amplitude = |a| = 3
Period = 2π/|b| = $2\pi/|1| = 2\pi$
Frequency = 1/period = $\frac{1}{2\pi}$

2. Suppose you are drawing a card from a standard 52 card deck and are choosing either a spade or a jack. What is the probability of drawing a spade or a jack?

$\frac{13}{52} + \frac{4}{52} - \frac{1}{52} = \frac{16}{52} = \frac{4}{13}$

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Find the amplitude, period, frequency, phase shift and vertical shift for the following:

Y = 2 cos x - 4 $a\cos(Bx+C)-D$

Amplitude = |a| = 2
Period = 2π/|b| = 2π
Frequency = 1/period = $\frac{1}{2\pi}$
Phase Shift= -c/|b| = none
Vertical Shift = down 4 -4

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Find the amplitude, period, frequency and phase shift for the following:

Y = 2 cos (x + π) + 5

Amplitude = |a| = 2
Period = 2π/|b| = 2π
Frequency = 1/period = $1/2\pi$
Phase Shift= -c/|b| = $-\pi$
Vertical Shift = up 5

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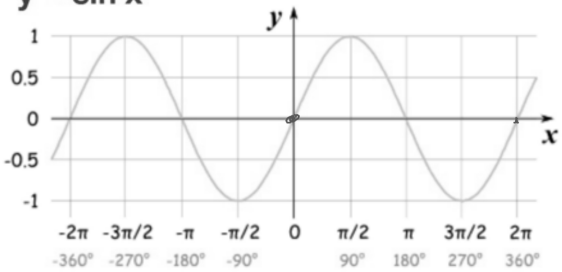
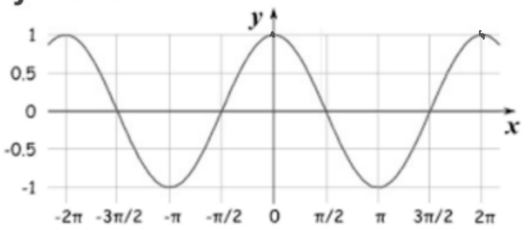
Graphing Sine and Cosine

y = sin x



y = cos x



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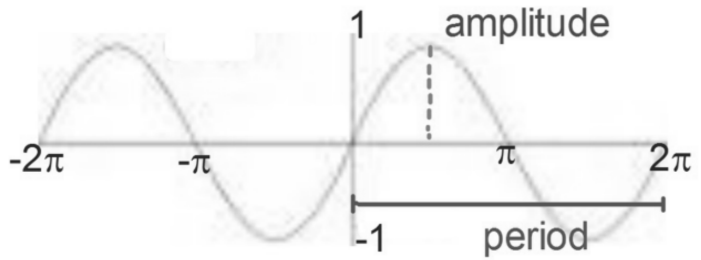
Sine Graph



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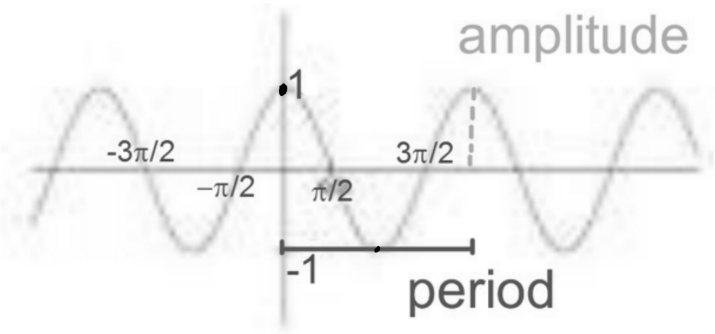
Cosine Graph



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To Graph Sine & Cosine:

- Identify the amplitude, period, frequency, phase shift and vertical shift
- Start graph from the origin
- Amplitude - to plot the first point
- Period - how far the graph has to go
- Frequency - how many points must be graphed
- Phase shift - how far left or right from the origina points must the new set of points be shifted
- Vertical shift – how far up or down from the original points must the new set of points be graphed

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