**Noteguide for Simple Harmonic Motion Kinematics (Video 11A) Name**

(Watch the crash course video first - She explains where these formulas come from)

ω – “Angular” velocity (rad/s)

T – Period of motion (s)

f – frequency (cycles/s or Hz)

x – Position (at some time) (m)

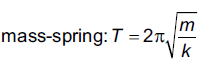
v – Velocity (at some time) (m/s)

t – elapsed time (s)

xo – Max Position (Amplitude) (m)



Kinematics Example: **(Are you in RADIANS????)**

A SHO goes up and down, and has a period of 12 seconds, and an amplitude of 5.0 m. If it starts in the middle going upward, write an equation of its motion:

a) What is its position and acceleration in 6.5 seconds?

b) What is its velocity in 6.5 seconds?

c) What times will it be at the top?

d) When will it be at the bottom?

e) What is its speed and acceleration when it is at a position of 1.75 m?