Oscillations:

Harmonic oscillator is usually a spring or pendulum with no friction, resistance, for small amplitude oscillations.

The differential equation is x’’ +f2x = 0, the solution to this differential equation is x = Asin(ft+p).

Here f is the frequency, x is displacement, t is time, A is amplitude, and p is phase.

https://en.wikipedia.org/wiki/Harmonic\_oscillator