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Math 1060

Modeling the Motion of a Spring

There are some types of systems some people see everyday like a pendulum, where you might find one on your clock (like mine). In my clock, everytime the pendulum is swinging ninety degrees to either the left or the right a second goes by. The amplitude is set at a position 0 for me, and then the right and left movement is the period, and then the frequency is how many seconds pass by.

There are many types of oscillators, but the type I will discuss is the damped harmonic oscillator, because if the damping ratio is underdamped (less than 1), than the amplitude is gradually decreasing to 0, and then the angular frequency can be used.

This project did change the way in which trigonometry can be applied to the real world because I now understand that almost everything in life has the capabilities of being a part of the trigonometric equation. I also learned that trigonometry can have confusing equations, but if you can think about it enough, the confusing equations can be solved with simplifying to make things more efficient.