Ma+bv+kx=f where f= the driving force

Part 1: ma+kx=0, this results in omega 0 and A0

Omega = sqrt(k/m) k= 1/32+1/32+1/32

Frequency = 2 omega/2pi

Part 2: ma+kx=f this results in omega f and A f

Goes from 0 to max, causes exponential growth because of formula, damping force causes it to die out

Amplitude: 3cm

Takes 5 cycles

.16 j/s = .5(k)(.03)^2 / time

Part 3: ma +bv+kx= fthis results in omega df and Adf

1.5 hz = 1.5 cm, no it dies out shortly after, it makes its own sine wave

1.7 hz = 1.56 cm, no however it does not die out as much but it does, makes a less pronounced sine wave

2.2hz = 2.6 cm, it does not die out, this is because it is very close to the resonate frequency of 2.3 hz

2.7 hz = 1.44 hz, it has a very unsteady amplitude

Side to side oscillations are also present at the resonant frequency of 2.3 hz   
securely attach the springs to take the wobble out

Part 4 omega = 14.41

F = 2.3 hz