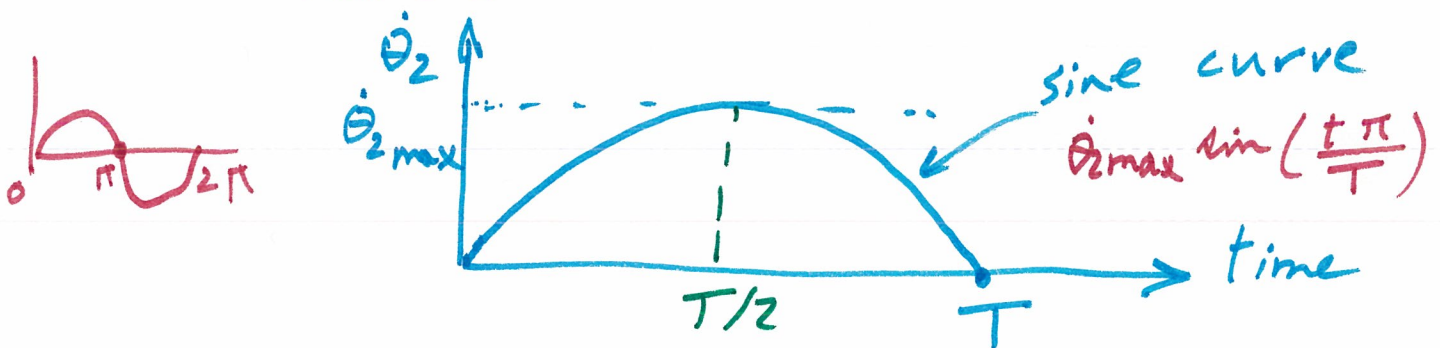


Project # 2

Analysis of the Can Crusher

Use your design of Project #1 (unless it was faulty) as a starting point:

- * Analyze displacement of the machine using complex phasors.
(solve for displacement unknowns and derive equations for the critical points)
- * Repeat to obtain velocity analysis (think of velocity input)
- * Think of the total time needed to crush a can T



$$\dot{\theta} = \frac{d\theta}{dt} \quad (\text{Know})$$

$$\theta = \int \dot{\theta} dt + C$$

Relate C to the range

$$\theta_{20} \xrightarrow{\text{at } t=0} \theta_{2f} \xrightarrow{\text{at } t=T}$$

Preliminary use to solve for θ_{2max}

* Write a code that simulates the machine

(Iterations will be function of time)

be sure to identify the closures in displacement analysis and use the useful one only

* Repeat the analysis in Working Model or SolidWorks

* Compare the results. Discuss the reasons for differences if they exist