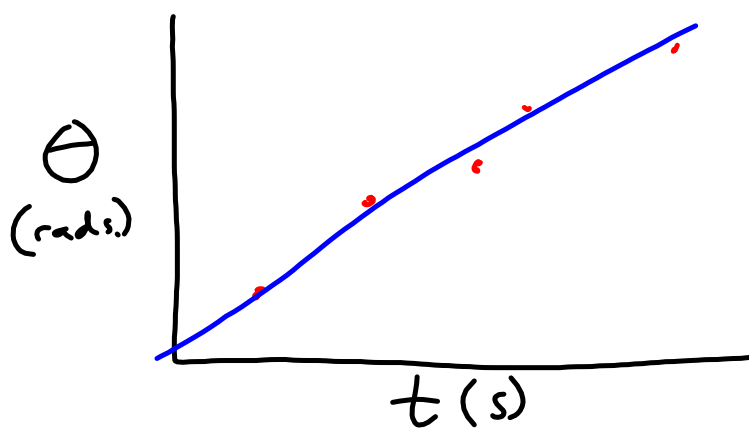


- CREATE A MODEL TO CHARACTERIZE THE ROTATIONAL MOTION OF THE FLYING PIG
 - Properties
 - Representations → graph, function of best fit
 - Rules of Behavior

- Graph: θ vs. t
 ↑ in radians



Constant Angular Velocity Model (CAVM)

• Properties

- Angle (radians) θ
- Time (seconds) t
- Radius (meters) r
- Period (seconds) T

• Representations:

- Graphical \rightarrow $\theta - t$
 $x - t$

- Mathematical

$$\omega = \frac{d\theta}{dt} \quad \text{angular velocity}$$

\uparrow lowercase Greek omega

$$v = r\omega \quad \text{relationship between linear and angular velocities}$$

$$T = \frac{2\pi}{\omega} \quad \text{relationship between period and angular velocity}$$

• Rules of Behavior

- Object moves the change in angle for a given change in time.
- There is an inverse relationship between period and angular velocity.
- The radius relates the linear and angular velocities.