

# SiQuENC: Newtonian dynamics for circular motion

## Neatly and graphically represent situation(s)

Carefully read the problem three times.

Draw system and relevant aspects of environment.

**B** – Use dashed bubble(s) to indicate object(s) in system (right now).

Identify requested unknowns.

## Graphically represent quantities and their relationships

### Free-body diagram

**E** – Is the **E**arth nearby (right now)?

**T** – Is anything **t**ouching the system (right now)?

**A** – Indicate +in and, if needed, +y and/or +tan direction(s).

Indicate axis of rotation (A.O.R.).

Indicate direction of positive angular advance about A.O.R.

## Identify relevant allowed starting point equations

Including Newton's laws (stated at bottom row)

	Force	$F_{IN}$	$F_y$	$F_{TAN}$
1				
2				
3				
4				
5				
6				
7	$\Sigma$	$ma_{IN}$ $(a_{IN} = \frac{v_{TAN}^2}{r})$	$ma_y$ (is $a_y = 0$ ?)	$ma_{TAN}$ (is $a_{TAN} = 0$ ?)

## Analyze

## Communicate