- Need a place to contribute
- How do I add to your GitHub?

Contraints handled as "are you sure" questions

Plan

- If the student answers "yes" to knowing a variable in an equation
- Check if other constraints (that we put in the code) were also said to be known
- Warn them about their "yes" answer

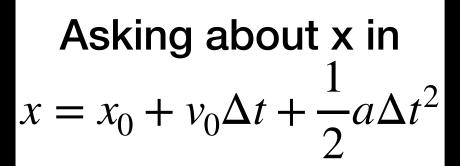
Example

- Dialog
 - Computer: do you know anything about a time interval the truck goes through?
 - Student: yes
 - Computer: Describe the time interval
 - Student: It's the time it takes it to go from rest to 10 m/s.
 - Computer: Do you know anything about the position of the truck?
 - Student: yes

Example

Asking about Δt

- Dialog
 - Computer: do you know anything about a time interval the truck goes through?
 - Student: yes
 - Computer: Describe the time interval
 - Student: It's the time it takes it to go from rest to 10 m/s
 - Computer: Do you know anything about the position of the truck?
 - Student: yes



Example

- Computer asks if the position of the truck is known
 - Asking about x in $x = x_0 + v_0 \Delta t + \frac{1}{2} a \Delta t^2$.
- Code:
 - ullet Checks internally if Δt was previously stated to be known for the truck
 - If so, say

"x is the position of the truck at the end of the time interval Δt , which you said previously said was 'It's the time it takes it to go from rest to 10 m/s.' Are you sure this is the position you mean?"

Constraints

| Equation # | Equation | Variable numbers |
|------------|--|--|
| 1 | $x = x_0 + v_{0x} \Delta t + \frac{1}{2} a_x \Delta t^2$ | 1: x 2: x_0 3: v_{0x} 4: a_x 5: Δt |
| | | $4: a_{x}$ $5: \Delta t$ |
| 2 | $v_{x} = v_{0x} + a_{x} \Delta t$ | 1: v_x 2: v_{0x} |
| | | 3: a_x 4: Δt |
| 3 | $\Delta t = t_f - t_i$ | $ \begin{array}{c c} 1: t_f \\ 2: t_i \end{array} $ |

"Are you sure" questions

| If this is said to be known format: (equation, variable) | Check if this is known already | And if so, issue this message |
|--|--------------------------------|---|
| (1,1) | (1,5) | x is the position of the object at the end of the time interval you said you knew "" |
| (1,1) | (3,1) | x is the position of the object at the instant of time tf, which you said you knew "" |
| (1,2) | (1,3) or (2,2) | x0 is the position of the object when it has speed v0x which you said you knew "" |
| (1,2) | (1,5) or (2,4) | x0 is the position at the beginning of this time interval that you said was "" |
| (1,2) | (3,2) | x0 is the position at the exact time you said was "" |
| | | |