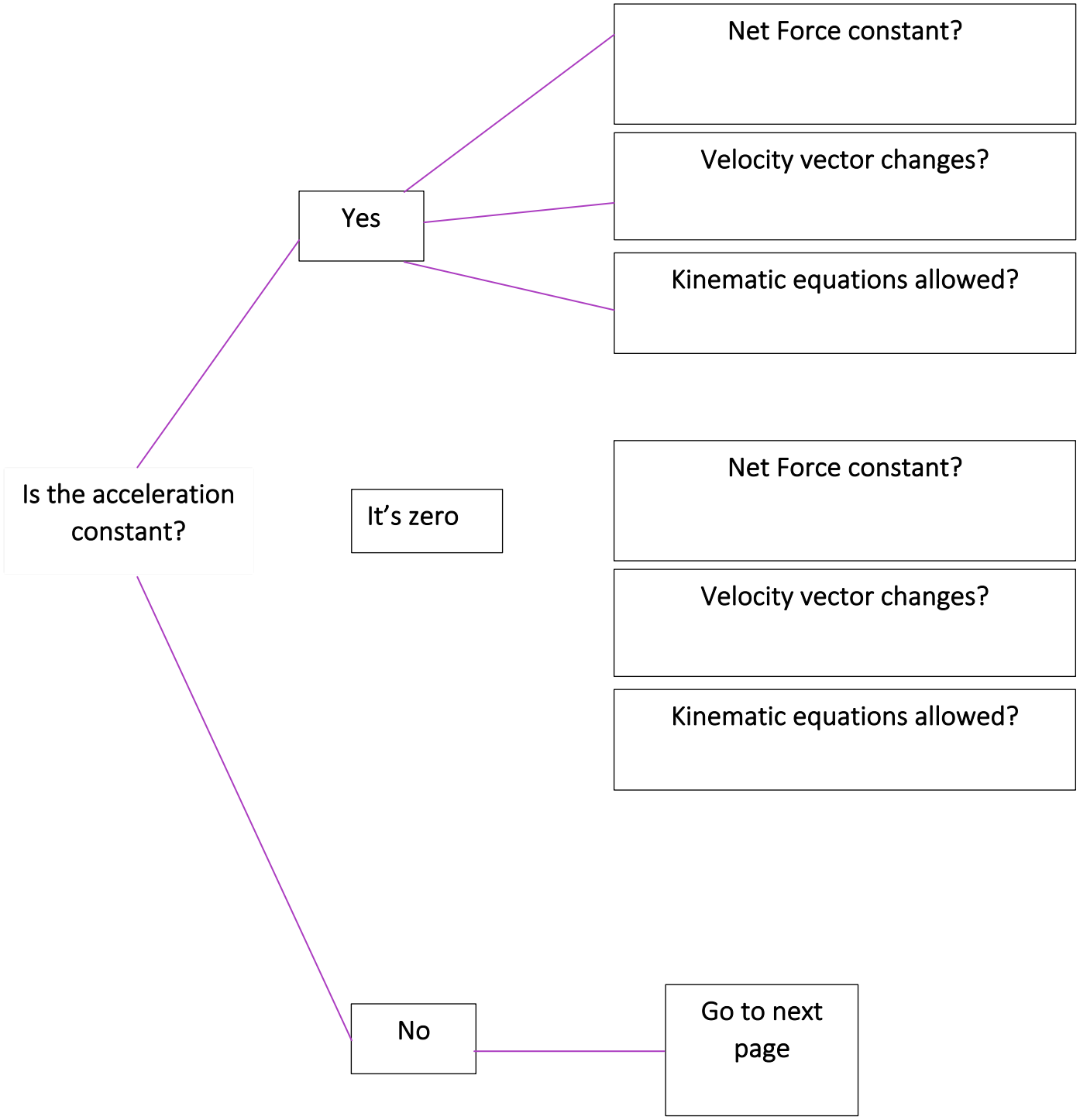

What if anything changes if the problem is 2 dimensional?

Acceleration is NOT constant.

Constantly changing acceleration

When is net Force constant?

When does the velocity vector change?

When are kinematic equations allowed?

Can break into segments that are constant acceleration

When is net Force constant?

When does the velocity vector change?

When are kinematic equations allowed?

Notes to self on how to deal with problem segments: details on sketch, variable names, approach to solving parts

	Velocity vector is zero.	Acceleration vector is _____ at that instant.
	Velocity vector is changing – it's increasing speed.	Acceleration vector is
Is velocity zero? Is the velocity vector changing?	Velocity vector is changing – it's decreasing speed.	Acceleration vector is
	Velocity vector is changing – it's changing directions.	Acceleration vector is

Is the object moving? (Look at more than just a single instant.)

yes

Is velocity changing?

Is acceleration zero, or non-zero?

What is the net force?

Strategy for using this info?

no

Is velocity changing?

Is acceleration zero, or non-zero?

What is the net force?

Strategy for using this info?

Is the net force constant?

Yes

What does this tell me about acceleration?

What does this tell me about velocity?

No

What does this tell me about acceleration?

What does this tell me about velocity?

Can we look at these in the reverse order (velocity tells me _____ about acceleration, which tells me _____ about net force?

If not, why not?

How many dimensions (one or two) do we need to describe all of the force and motion variables?

two

Are we likely to need to calculate components?

How do we indicate direction?

Strategies and tools we use to solve these problems

one

Are we likely to need to calculate components?

How do we indicate direction?

Strategies and tools we use to solve these problems

Context Clues – create your own glossary

Here are a few clues to get you started:

At rest =

Smooth =

Rough =

Constant speed =

Steps for qualitative representation in a problem with forces

What steps do we take to identify variables and equations?

What kinds of things can we do for a reasonability check?

What steps do we use to identify when/how to calculate components of vectors?