

# SiQuENC: Impulse-momentum theorem (algebra-based)

## Neatly and graphically represent situation(s)

Carefully read the problem three times.

For each situation, draw object(s) and relevant aspects of environment.

use dashed bubble(s) to indicate object(s) in system.

indicate positive direction(s).

Identify requested unknowns.

Illustration of **initial** situation

Illustration of **final** situation

## Graphically represent quantities and their relationships

### Bar chart

Initial momenta and externally supplied impulse

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### Bar chart

Final momenta

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## Identify relevant allowed starting point (in) equation(s)

$$\Sigma \vec{p}_i + \left( \sum_{\substack{\text{EXT} \\ \text{ON SYS}}} \vec{F}_{\text{AVG}} \right) \Delta t = \Sigma \vec{p}_f$$

	Object	p <sub>x</sub> = mv <sub>x</sub>	p <sub>y</sub> = mv <sub>y</sub>		Object	p <sub>x</sub> = mv <sub>x</sub>	p <sub>y</sub> = mv <sub>y</sub>
1				1			
2				2			
3	Impulse	ΔJ <sub>ΣF<sub>x</sub></sub> =	ΔJ <sub>ΣF<sub>y</sub></sub> =	3			
Σ	/			Σ	/		

(Continue on separate sheet).

## Use numbered steps to show REASoNing

## Communicate