

Worksheet: Momentum conservation (calculus-based physics)

Illustration of **initial** situation

Draw system and relevant aspects of environment.
Use dashed bubble(s) to indicate object(s) in system.
Indicate positive direction(s).

Illustration of **final** situation

Draw system and relevant aspects of environment.
Use dashed bubble(s) to indicate object(s) in system.
Indicate positive direction(s).

$$\Sigma \vec{p}_i + \int_{t=t_i}^{t=t_f} \left(\sum_{\substack{\text{EXT} \\ \text{ON SYS}}} \vec{F} \right) dt = \Sigma \vec{p}_f$$

Object	$p_x = mv_x$	$p_y = mv_y$
1		
2		
3		
4		
Σ		

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1		
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