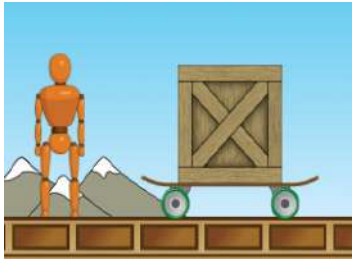
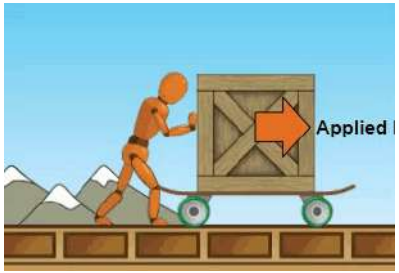
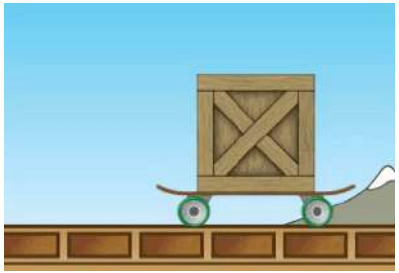
Possible Situations to Analyze! Choose 4 that will help you answer our guiding questions. Copy and Paste is you want!



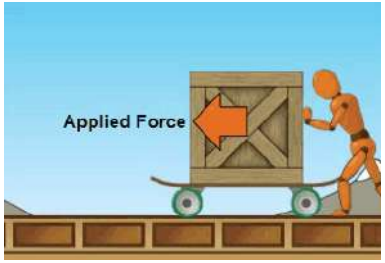
A crate sits at rest.



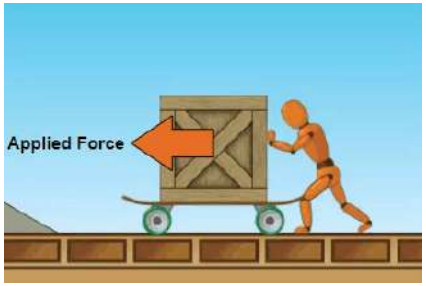
Crate is pushed to the right while moving to the right



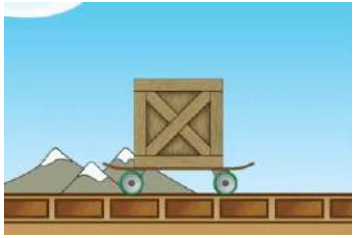
Crate moves to the right (no push)



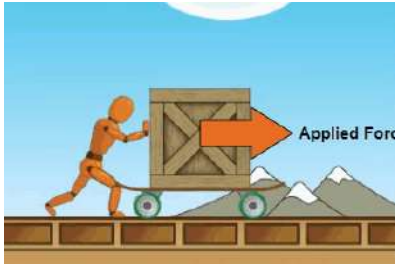
Crate is pushed to the left while moving to the right



Crate is pushed to the left while moving to the left



Crate moves to the left (no push)



Crate is pushed to the right while moving to the left

Guiding questions

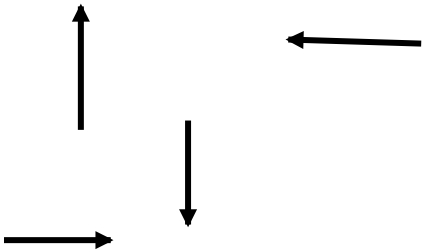
1. How does a system behave (specifically move) when the net force is 0 N? $\Sigma F = 0 \text{ N}$

1. How does a system behave (specifically move) when there is a net force?

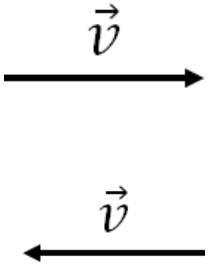
$$\Sigma F \neq 0 \text{ N}$$

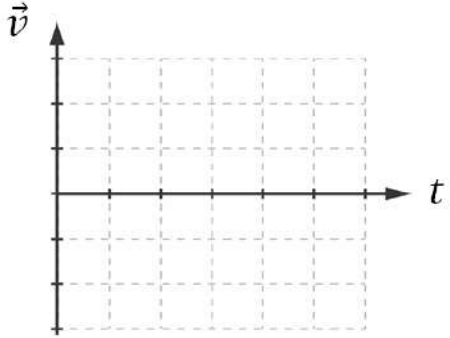
1. Is there a relationship between the direction of the net force and the direction of motion (velocity)? If not, does another relationship exist?

Use these symbols to aid in your models (copy-paste please! Don't steal!).



$F_{\text{ext on sys}}$

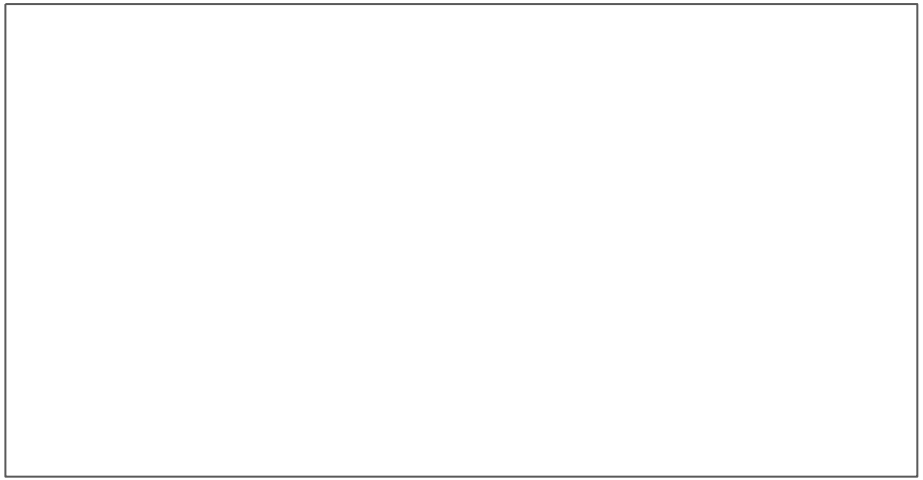


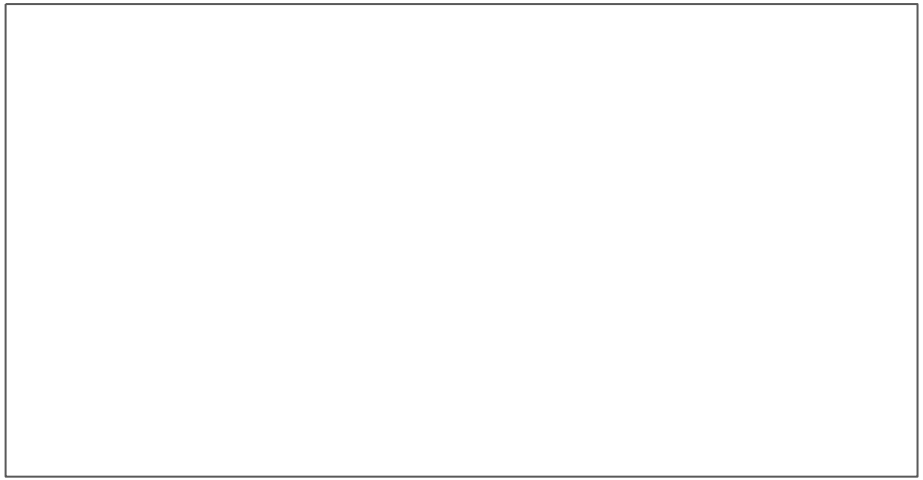


$\Sigma F = 0$ N

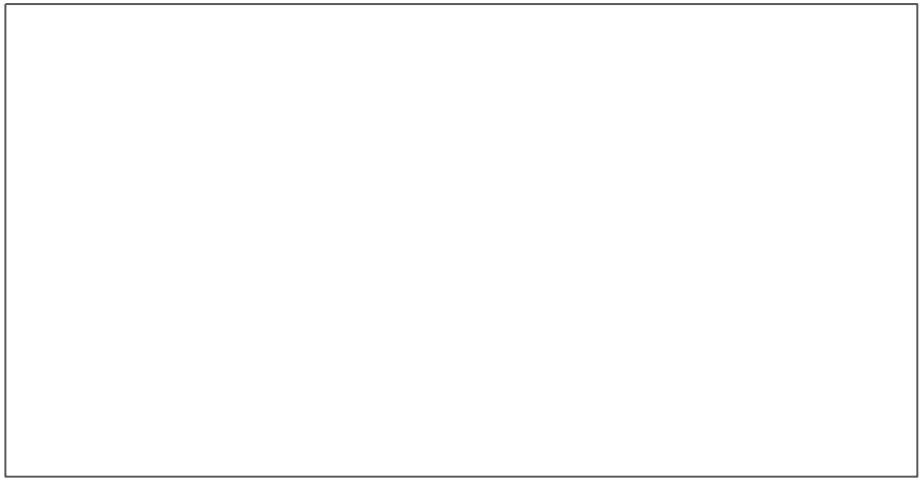
$\Sigma F \neq 0$ N

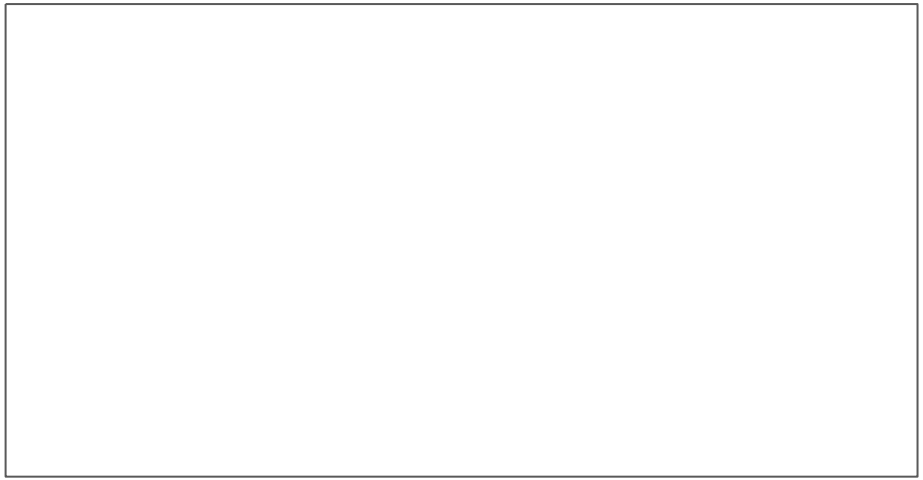
Group 1 - Made by:



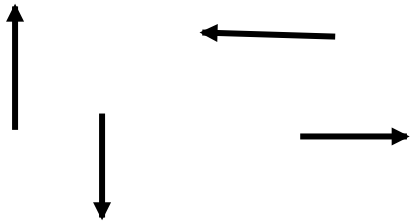


Group 2 - Made by:

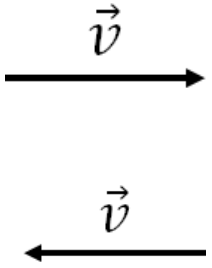


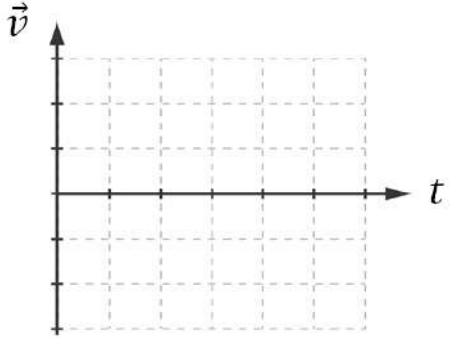


Use these symbols to aid in your models (copy-paste please! Don't steal!).



$F_{\text{ext on sys}}$





$\Sigma F = 0\ \text{N}$ $\Sigma F \neq 0\ \text{N}$