

# BASIC MOTION GRAPHS.

F = Forwards  
B = Backwards

F  
Constant Speed



$$a = 0$$

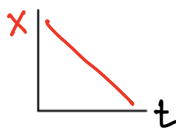
slope

slope

• Forwards  
just means  
+ velocities

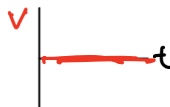
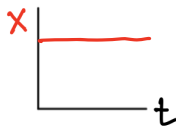
• Backwards  
just means  
- velocities

B  
Constant Speed



$$a = 0$$

standing  
still



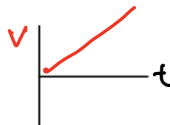
$$v = 0$$

$$a = 0$$

↑ No Acceleration

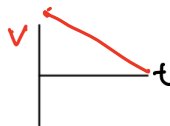
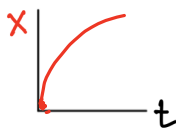
↓ w/ Acceleration

F  
Speed up



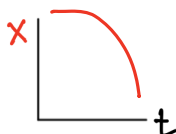
$$a = +$$

F  
Slow down



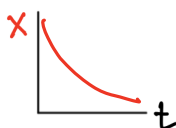
$$a = -$$

B  
Speed up



$$a = -$$

B  
Slow Down



$$a = +$$

	$+a$	$-a$
$+V$	S. up.	S. Down
$-V$	S. Down	S. up

$V \& a$  same sign  $\rightarrow$  speed up  
 opposite sign  $\rightarrow$  slowing down

Remember:

Velocity is the slope of position and so describes the rate at which your position changes.

Acceleration is the slope of velocity and so describes the rate at which your velocity changes.