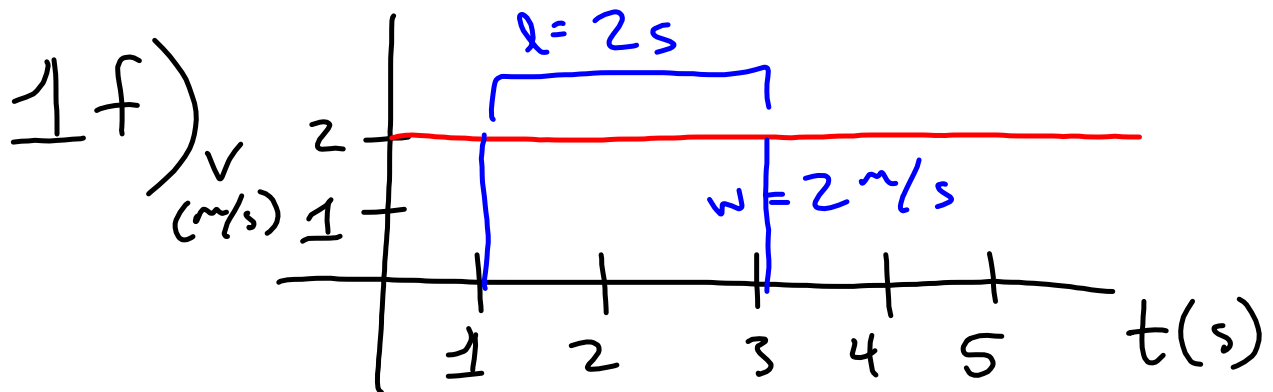


## CVPM Worksheet 4



$$\begin{aligned}
 A &= \Delta t v \\
 &= (2\text{ s})(2\text{ m/s}) \\
 &= 4\text{ m}
 \end{aligned}$$

This is the displacement of the object (because this came from a velocity-time graph).

MODEL NAME:

CONSTANT VELOCITY PARTICLE MODEL

DESCRIPTION:

Particle moving with constant velocity

PROPERTIES:

• MEASURED

- Position (m)  $\rightarrow x$

- Time (s)  $\rightarrow t$

• CALCULATED:

- Distance = total path length  
(scalar!) =  $\Delta x$   
 $\uparrow$  "change in"

- Speed =  $\frac{\Delta x}{\Delta t}$   
(scalar!)

- Displacement = final pos. - initial pos.  
(vector!) =  $\Delta \bar{x}$

- Velocity =  $\frac{\Delta \bar{x}}{\Delta t}$   
(vector!)

## REPRESENTATIONS

- Graphically
  - Position-time
  - Velocity-time
  - Speed-time
- Algebraically
  - $y = mx + b \rightarrow$  slope-intercept form on various graphs
  - Equations
- Diagrammatically
  - Motion Maps
- Verbally/Written

## Rules of Behavior

change of position  
is directly proportional to  
change in time