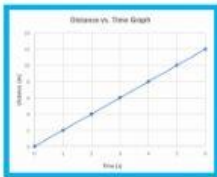


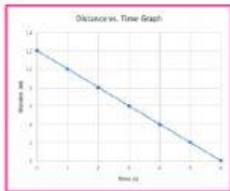
Graphing Motion: Graphs can visually help us to understand an object's motion.

- Slope: the **steepness** of a **line**.
 - calculated as **rise / run** = $\frac{\Delta y}{\Delta x}$
- On a **distance** vs. time graph, this means...
 - calculated as $\frac{\text{rise}}{\text{run}} = \frac{\Delta y}{\Delta x} = \frac{\text{distance}}{\text{time}}$
- Therefore on a distance vs. **time** graph, the slope = **speed**.

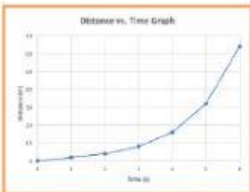
Graphing Trends for Distance vs. Time Graphs



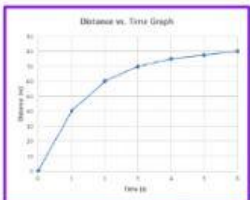
The object is moving at a **constant** speed, **away** from the reference point.



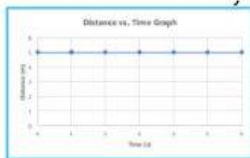
The object is moving at a **constant** speed, coming **towards** the reference point.



The object is **speeding up (accelerating)**, due to the line becoming **steeper**.



The object is **slowing down (decelerating)**, due to the line **leveling out**.



Object is **not moving (stationary)**.

In this graph, place the numbers to indicate where the trend is occurring.
 1. An object moving at a constant speed.
 2. An object that is stopped.
 3. An object that is speeding up.

