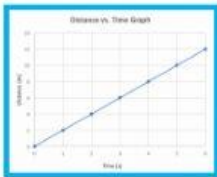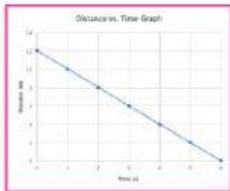**Graphing Motion:** *Graphs can visually help us to understand an object's motion.*

- Slope: the **steepness** of a **line** .

   - calculated as **rise / run** = ▲ *(delta) y /* ▲ *(delta) x*

- On a **distance** vs. time graph, this means…

   - calculated as   rise = Δy = distance

                          run   Δx   time

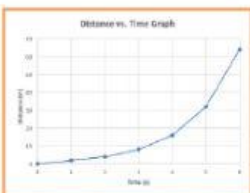- Therefore on a distance vs. **time** graph, the slope = **speed**.

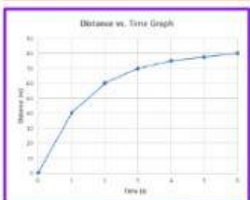### Graphing Trends for Distance   vs.   Time Graphs

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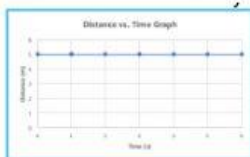

The object is moving at a **constant** speed, coming **towards** the reference point.

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.

Distance

Stationary

Moving away quickly

Moving away slowly

Moving back

Moving away and getting faster

Time

LIVEWORKSHEETS