

Sep 11-8:17 AM

The area under the graph is equal to the area between the graph and the horizontal axis. It can be + or -.

Summary:

The slope of the  $x-t$  graph represents velocity.

The slope of the  $v-t$  graph represents acceleration.

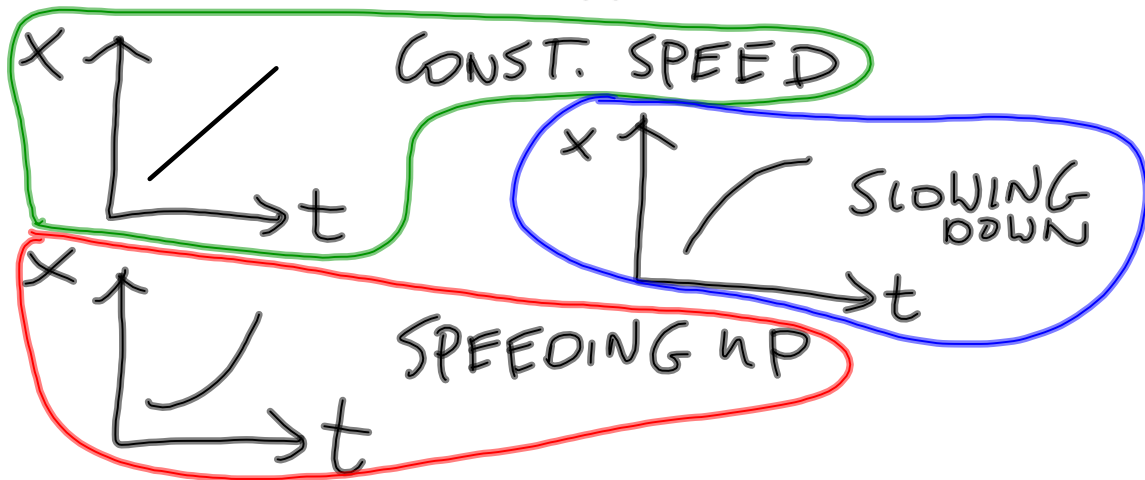
The area under the  $v-t$  graph represents change in position ( $\Delta x$  - displacement).

The area under the  $a-t$  graph represents change in velocity ( $\Delta v$ ), due to acceleration  $a$ .

Sep 13-11:54 AM

1. Graph  $x-t$  and  $v-t$  of Usain Bolt's famous 100 meters dash run. Here are the stages of his run:

- He starts from rest;
- Speeds up for 3 seconds;
- Continues with his max. speed for 7 seconds;
- Crosses the finish line and starts slowing down for 10 seconds;
- Comes to rest and strikes funny poses for 40 seconds.



Sep 13-9:13 AM