

MOTION on Broadway: Performing Graphs

Objective: Practice drawing position vs. time graphs and velocity vs. time graphs from the motion described in each example.

- (1) Position-Time Graph: Walk forward 3 meters in 9 seconds.**
- (2) Position-Time Graph: Stand still for 3 seconds. Then Walk forward 2 meters in 6 seconds.**
- (3) Position-Time Graph: Walk forward 3 meters in 3 seconds. Then stand still for 5 seconds.**
- (4) Position-Time Graph: Walk forward 3 meters in 3 seconds. Stand still for three seconds. Walk back 3 meters in 3 seconds.**
- (5) Velocity-Time Graph: Walk forward 1 meter every second for 4 seconds. Stop for 2 seconds. Walk forward 1 meter every second for 3 seconds.**

(6) Velocity-Time Graph: Walk *forward* one meter every second for 3 seconds. Then walk *backward* one meter every second for 3 seconds. Next walk *forward* 1 meter every second for 3 seconds.

(7) Position-Time Graph: Walk forward 1 meters in 4 seconds. Then walk forward 2 meters in 2 seconds. Then stand still for 3 seconds.

(8) Position-Time Graph: Start at the right side of the room. Walk back 4 meters in 4 seconds.

(9) Velocity-Time Graph: Walk forward 1 meter every second for two seconds. Then slow down and take 3 seconds to stop. Stay still for two seconds, then walk 1 meter forward in 1 second.

(10) Velocity-Time Graph: Speed up to 1 meter per second in 4 seconds. Then stay at that speed for 3 seconds.