

Name _____

Physics

Graphical Analysis of Motion

Goal: To make accurate graphs of motion

Requirements: Graphs should be scaled and motion accurately graphed
 Label the graphs including x and y axes
 Use a pencil; a ruler for straight lines
 All graphs should be placed on graph paper; (2) graphs per paper

1. A student starts at 0 meters and walks away from the detector traveling 10 m in 5 seconds. Stops for 5 seconds. Walks 4 m in 10 seconds back towards the detector and stops. Make d/t and v/t graphs of this motion on a sheet of graph paper. Sketch out this motion and show your math in the space below.

2. A student starts 20 away from the detector. She walks 12 m in 4 seconds towards the detector. Stops for 2 seconds. Then walks 4 additional meters towards the detector in 8 seconds. Make d/t and v/t graphs of this motion on a sheet of graph paper. Sketch out this motion and show your math in the space below.

3. A student starts at 0 meters and accelerates away from the detector. His velocity changes from 0 m/s from the start of his motion (at 0 seconds) to 10 m/s in the time interval of 5 seconds. Make v/t and a/t graphs of this motion on a sheet of graph paper. You DO NOT have to make a d/t graph. Sketch out this motion and show your math in the space below.