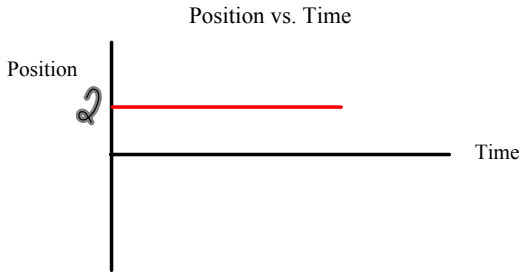
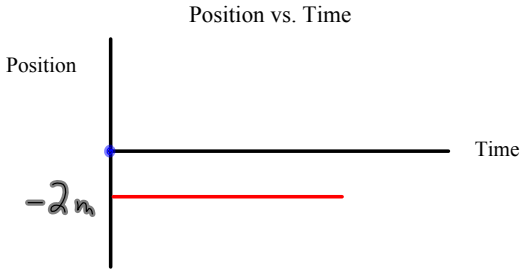
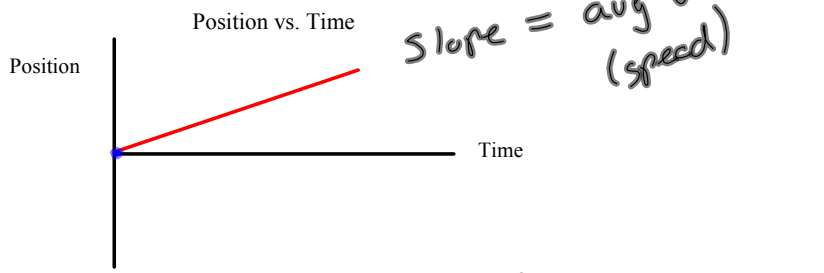
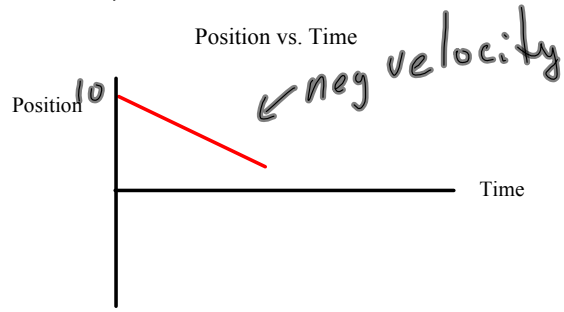
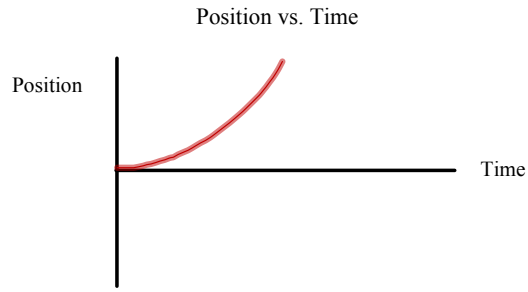
Position-Time Graphs

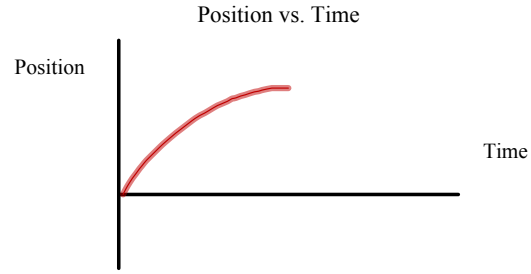








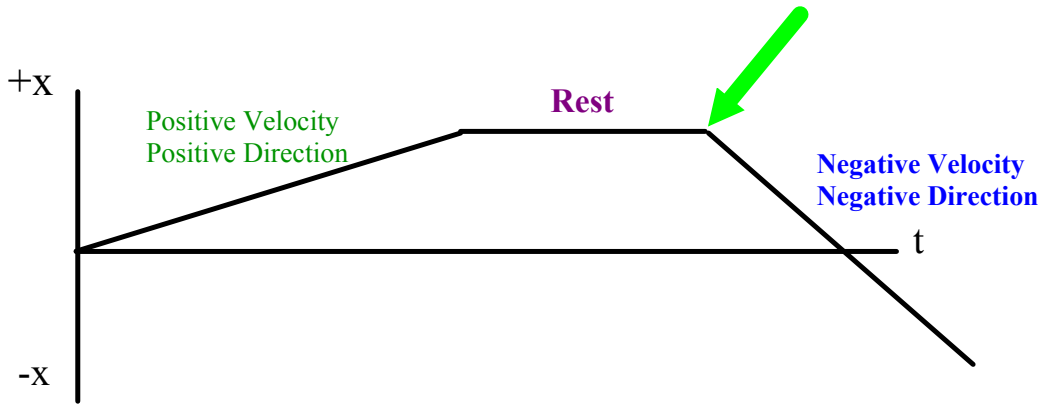




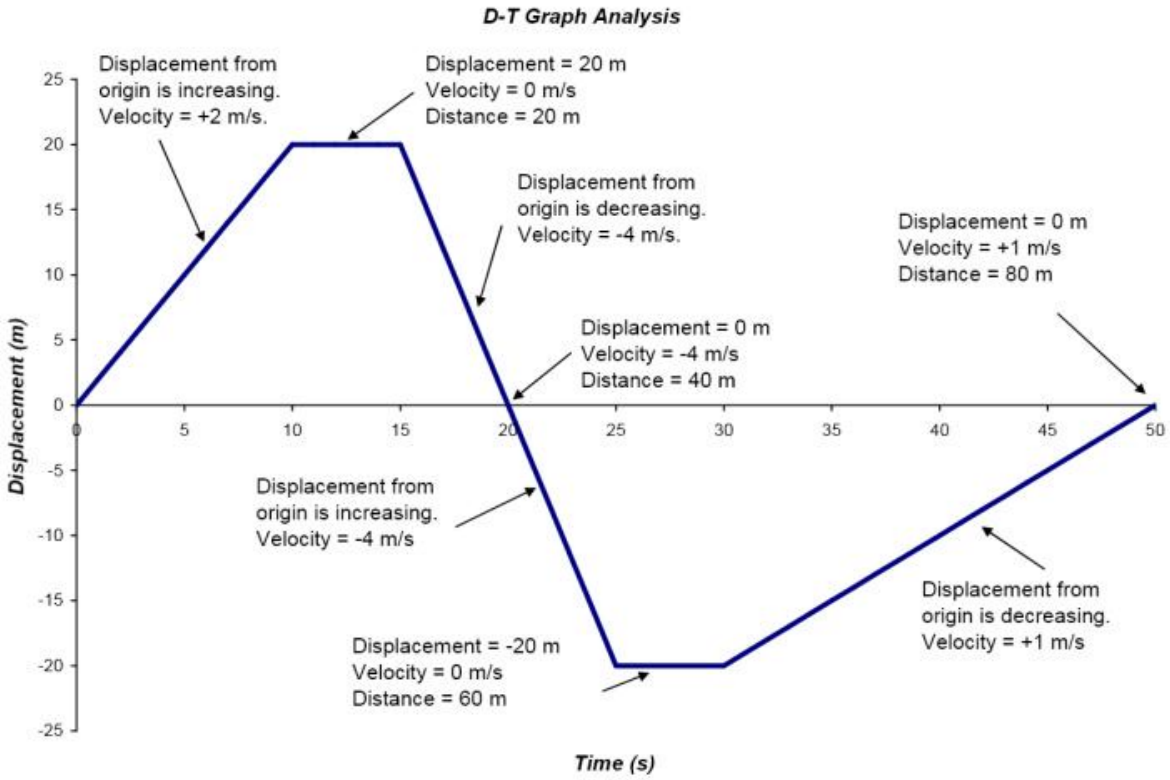
Position-Time Graphs

Direction of Motion

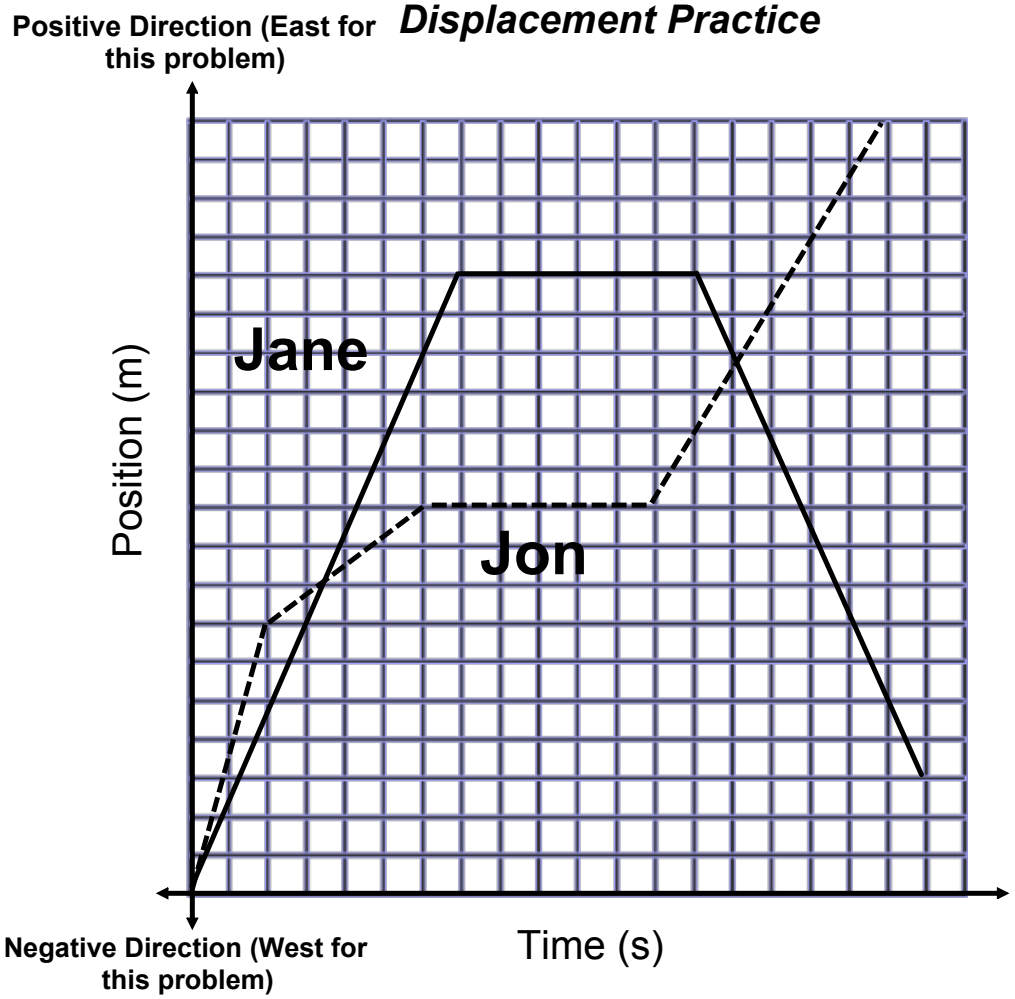
If the velocity of an object changes from positive to negative (or vice versa) it simply means that it has changed direction. On a position-time graph this occurs when the velocity changes signs.



Physics 112: Displacement and Velocity



Displacement Practice



a) What initial velocity did each person start off with? (Jane: 2.3 m/s [E]; Jon 3.5 m/s [E])

b) What was the final velocity of each person? (Jane 2.2 m/s [W]; Jon 1.7 m/s [E])

c) How long after the start did Jane start moving west? (13 seconds)

d) At what time were both people at the same location? (14 seconds)

e) What was the total distance traveled by each person? (Jane 29 m; Jon 20 m)

f) What was the final displacement of each person? (Jane 3 m [E]; Jon 20 m [E])

g) What was Jon's instantaneous speed at the 5.33 s mark? (0.75 m/s)

h) What was each person's average velocity for the entire trip? (Jane: 0.0.16 m/s [E]; Jon: 1.1 m/s [E])

i) What was each person's average speed for the entire trip? (Jane: 1.5 m/s; Jon: 1.1 m/s)