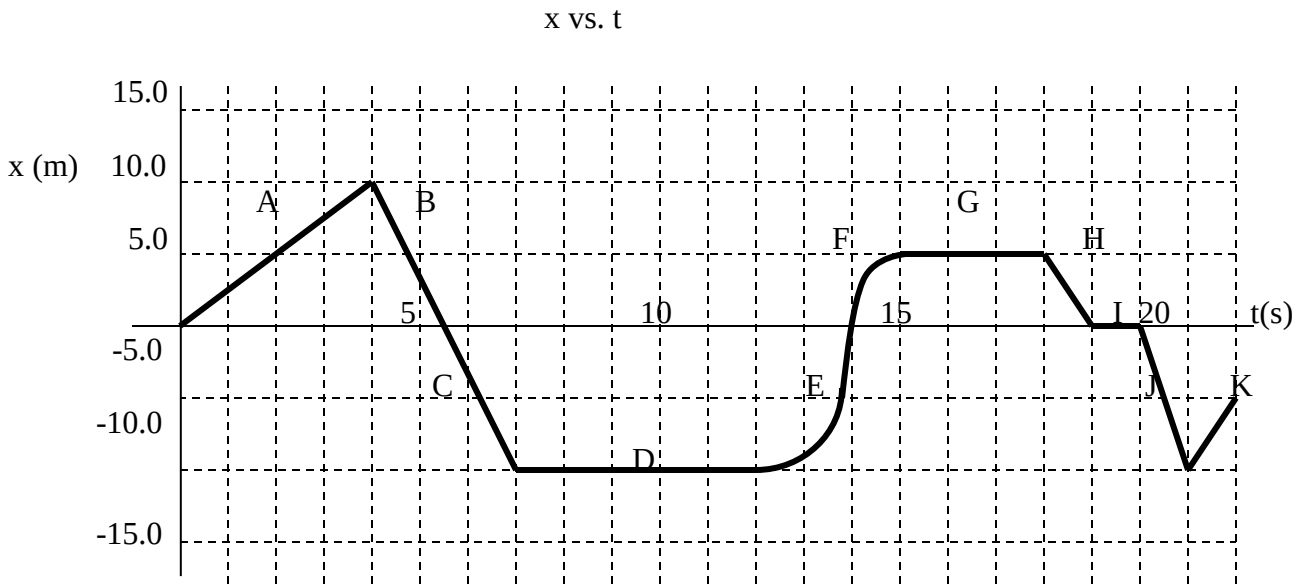
Position Vs. Time Graphs Name:_____ Date:_____

1. Little Joey plays with his remote control car, and generates the motion graph below. The car starts by moving eastwards.



a. Identify section(s) where the car moves with constant velocity.

b. Identify section(s) where the car moves west.

c. Identify section(s) where the car speeds up.

d. When is the car at rest?

e. What is the average velocity of the car between 0 and 15 seconds?

f. What is the average **speed** of the car in the same time interval?

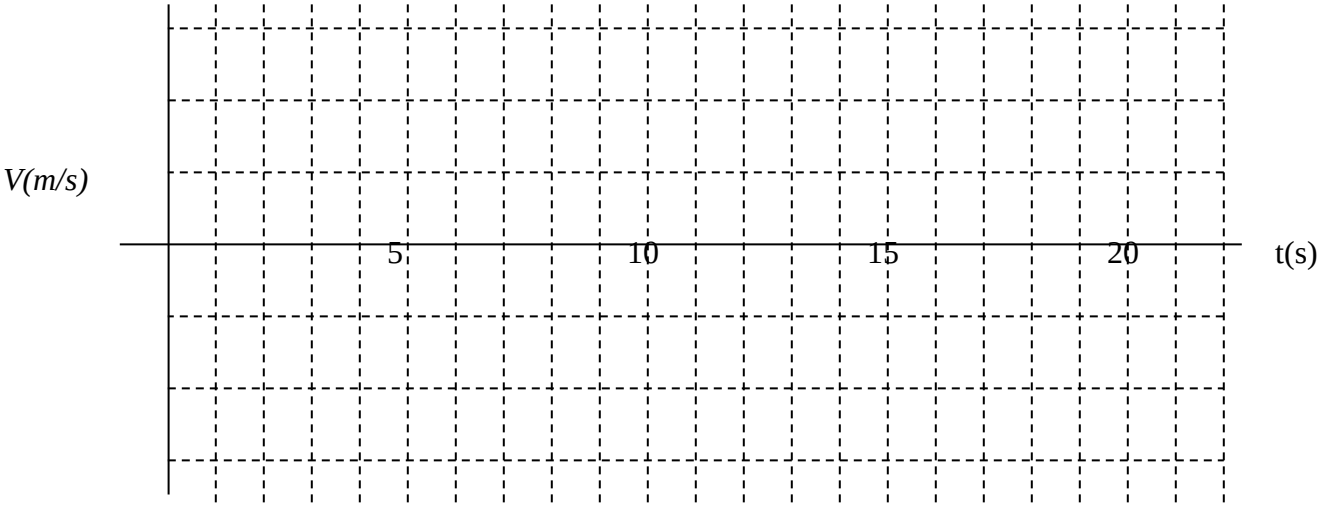
g. What is the total displacement of the car from 0 to 22 seconds?

h. What is the instantaneous velocity of the car at 13 seconds?

Position Vs. Time Graphs Name:_____ Date:_____

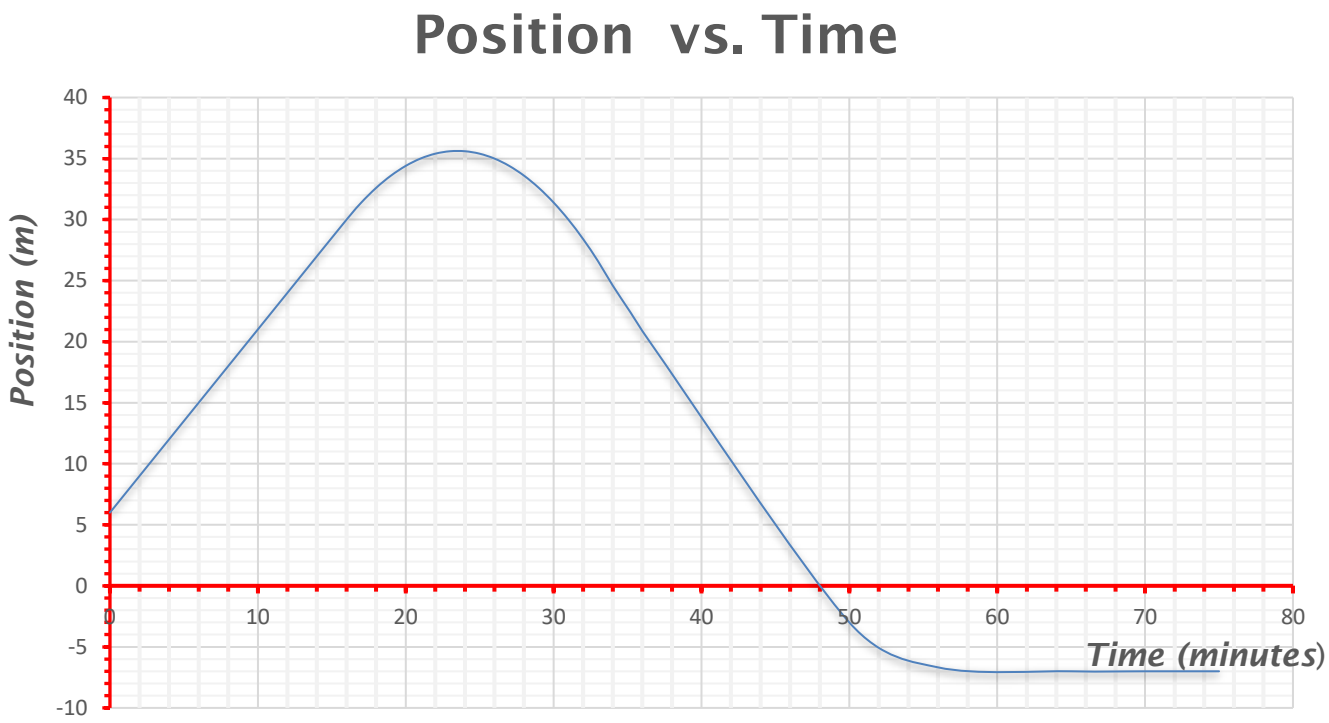
i. Draw a velocity vs. time graph describing the motion of the car. (Show your work)

V vs. t



Position Vs. Time Graphs Name:_____ Date:_____

2. Little Joey plays with his remote control car, and generates the motion graph below. The car starts by moving south.



a. Identify section(s) where the car moves with constant velocity.

b. Identify section(s) where the car moves North.

c. Identify section(s) where the car speeds up.

d. During what time interval does the car move backwards speeding up?

e. When is the car at rest?

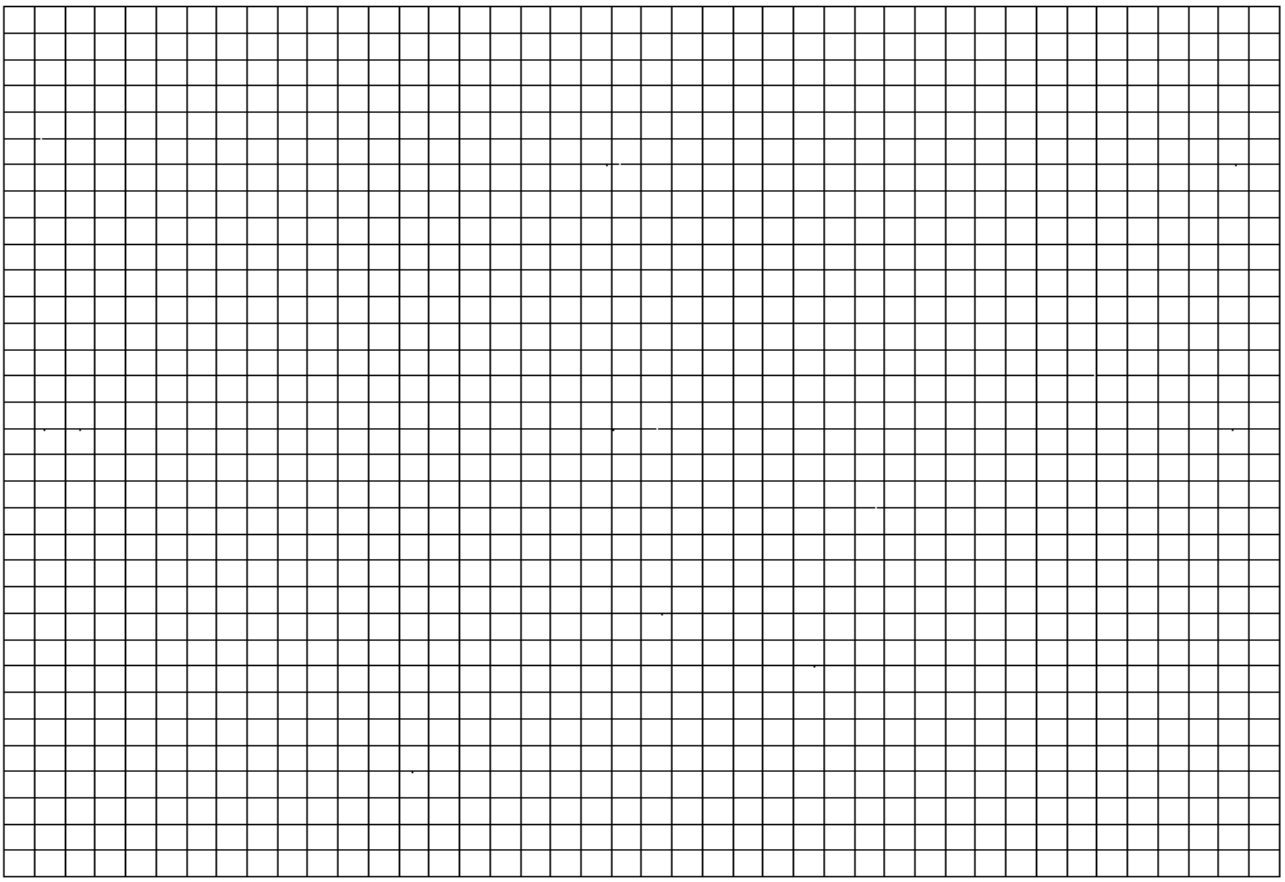
f. What is the average velocity of the car between 0 and 60 seconds?

g. What is the average **speed** of the car in the same time interval?

Position Vs. Time Graphs Name:_____ Date:_____

h. What is the instantaneous velocity of the car at 52 seconds?

i. Draw a velocity vs. time graph describing the motion of the car. (Show your work)



Answers:1. a) A, B, C, H, J, K b) B, C, H, J c) E d) D, G, I e) Δx = 5 m east, v = 0.33 m/s east f) d= 45m, s= 3 m/s g) 5 m West h) v~ 2.0 m/s east

2. a) 0-16s, 36s-50s b) 24s-60s c) 24s-56s d) 24s-36s e) 58s-70s f) 0.217 m/min North g) 1.22 m/min h) 0.786 m/min North