

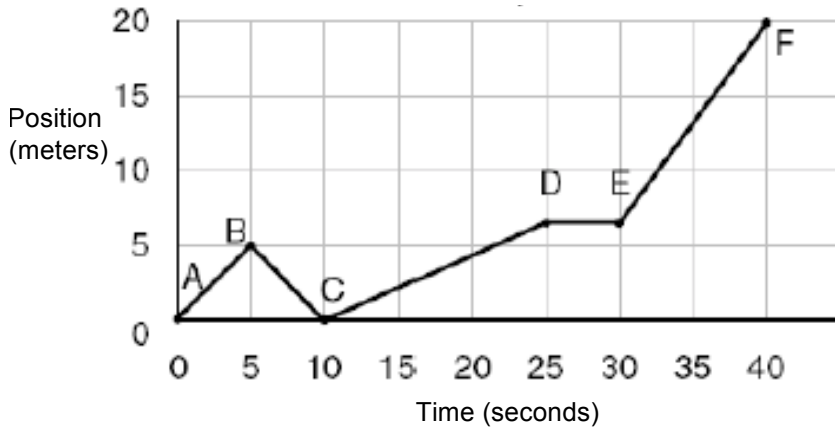
Name: _____

Class Period: _____

Physics: Kinematics in One-Dimension
Graphical Analysis: Interpretation HW

1. The graph below shows Sarah's drive from home (A) to school (F).

Sarah's Trip to School

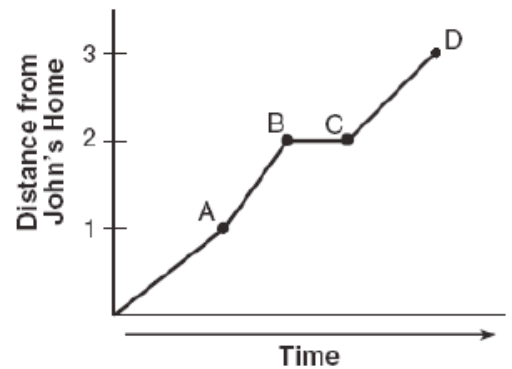


A. Sarah left her backpack at home and had to return to get it. Which segment of the graph shows this motion? How do you know?

B. Sarah also had to wait on a train to pass. Which segment shows this part of the trip?

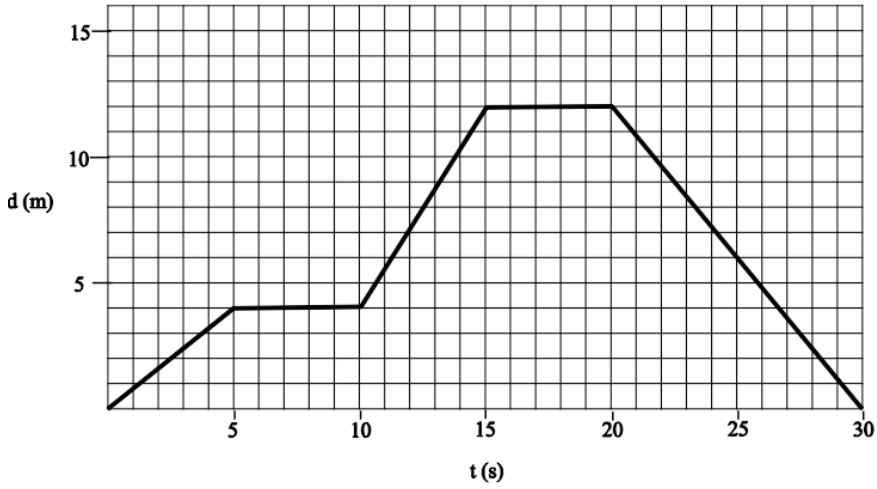
2. John left his house and walked 3 blocks down the street to a friend's house, as shown by the position vs. time graph below.

A. Describe his motion.



- B. Which of the choices below best describes what may have happened during segment BC?
- John got to his friend's house and stayed for the rest of the day
 - John had to wait to cross a busy street
 - John returned home to pick up something he forgot
 - John walked up a huge hill and then walked across level ground

3. Use the position vs. time graph shown below to answer the following questions (A – E)



A. How far does the object travel in the first 5 seconds?

B. How far does the object travel in the second 5 seconds?

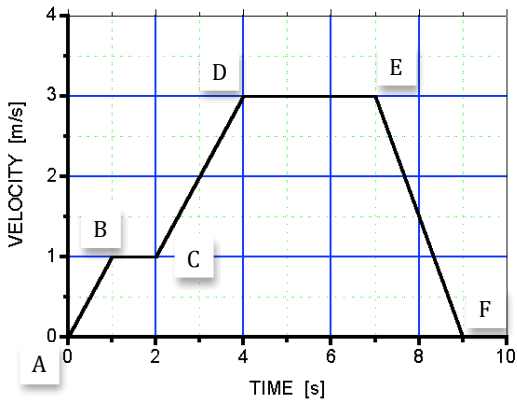
C. During which intervals does the object have a positive velocity?

D. During which intervals does the object have a negative velocity?

E. Is there a time or times when the velocity is zero?

4. Please do the following analysis of the **VELOCITY vs. TIME** graph shown below.

A. Using the line of the graph, describe the velocity of the object during the segments:



AB:

BC:

CD:

DE:

EF:

B. Using the slopes of the lines, calculate the acceleration during segments:

AB:

BC:

CD:

DE:

EF: