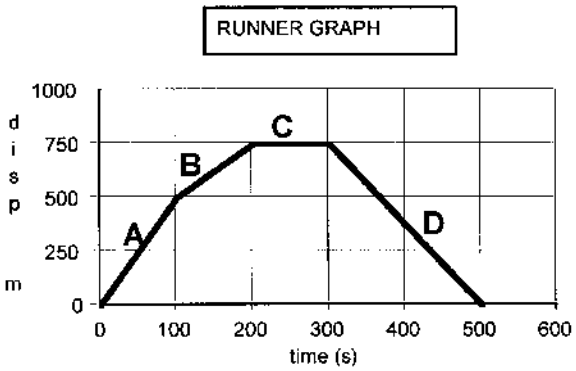
GRAPHING WORKSHEET #1

1. The diagram below shows a graph of a PRA Miners cross country runner.



a. During which segment was he running the fastest?
A

b. What was the farthest distance that he reached?
750 m

c. During what time segment did he rest?
200 to 300 s

d. What was his displacement between 100 and 300 seconds?
250 m East

e. What was his velocity during each of the labeled segments?
A: 5 m/s

B: 2.5 m/s

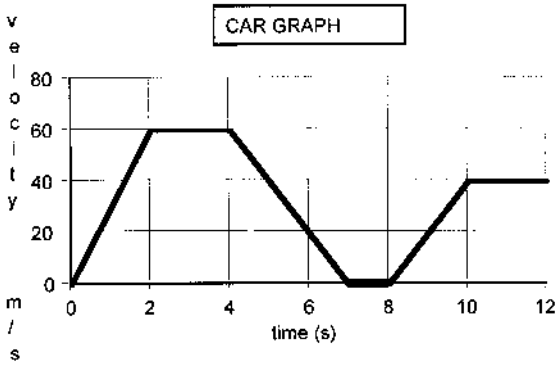
C: 0 m/s

D: 3.75 m/s
What was the total distance that he traveled?
1500 m

f. What is the total displacement?

0

2. A velocity vs. time graph for a car is shown below.



a. At what time(s) is the car stopped?

7 s to 8 s

b. At what time(s) did the car have the greatest velocity?

2 s to 4s

c. What was the greatest velocity of the car?

60 m/s

d. At what time(s) was the car accelerating?

0s – 2s and 8 – 10 s

e. How far did the car travel between 2 seconds and 4 seconds?

120 m

f. How far did the car travel between 0 and 2 seconds?

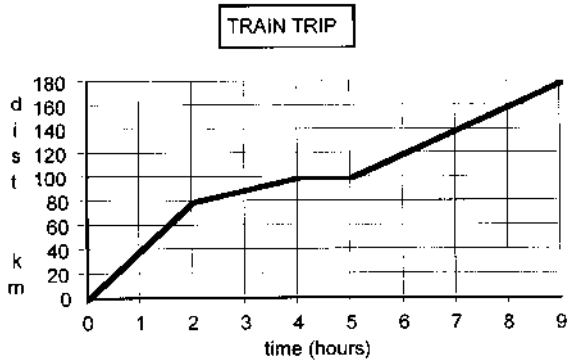
120 m

g. What is the total distance that the car traveled?

580 m

h. What is the total displacement?
390 m
(Area under the Curve)

3. Use the graph below to answer the following questions:
(Express all answers in kilometers and hours.)



a. How far did the train travel during the first two hours?

80 km

b. What was the average speed during the first two hours?

80/2 = 40 km/h

c. What was the average speed of the train between the second and the fourth hour?

(100 - 80)/2 = 10 km/h

d. What was the average speed of the train between hour 4 and hour 5?

0 km/h

e. What was the instantaneous speed of the train at hour 7?

20 km/h

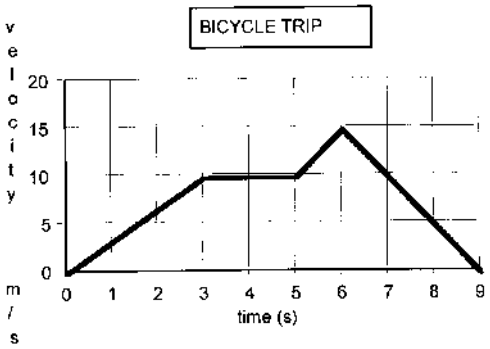
f. What was the average speed of the train between the second and the fifth hour?

(100 - 80)/3 = 6.7 km/h

g. What is the average speed of the train for the entire trip?

180/9 = 20 m/h

4. Use the Bicycle Graph below to answer the following questions:



a. Is the acceleration greater between 2 and 3 seconds or between 5 and 6 seconds?

5 and 6 seconds

b. During what time interval(s) is the acceleration zero?

3 s to 5 s

c. What is the displacement between 3 and 5 seconds?

20 m

d. What is the displacement between 6 and 8 seconds?

10 m

e. At what time is the velocity the greatest?

6 s

f. When is the velocity equal to zero?
0s, 9 s

g. What is the displacement between 0 and 9 seconds?
70 m (Area Under the Curve)

h. What is the distance traveled by the bicyclist between 0 and 9 seconds?
100 m