Optional Review:

From the Book:

Page 69: 9, 11, 13, 19, 21, 23, 27, 29, 30, 49

9. A school bus travels from El Paso Texa to Chiuahua Mexico in 5.2 hours with an average velocity of 73 km/hr to the south. What is the bus’ displacement?

11. The Olympic record for a marathon is 2 hours 9 minutes and 21 seconds. If the average speed of a runner achieving this distance is 5.436m/s what is the marathon distance?

13. Sally travels by car from one city to another. She drives for 30 mins. at 80 km/hr, 12 mins. at 105 km/hr and45 mins. at 40 km/hr and she spends 15 mins. eating lunch and buying gas.

c. Draw her d vs t graph, v vs t graph and a vs t graph.

19. If a car is traveling eastward can it’s acceleration be pointed westward? Explain and use examples!

21. A car is traveling at 7 m/s accelerates at a rate of 0.8 m/s/s for an interval of 2 s. Find the final velocity.

23. A car moving westward along a straight level road increases its velocity uniformly from 16 m/s to 32 m/s in 10 sec.

a. What is the car’s acceleration?

b. How far does the car travel?

27. A car accelerates uniformly from 75km/h (21 m/s) to 0 km/h (0 m/s) in 21 s. How far does it travel before stopping?

29. A boy sledding down a hill accelerates at a rate of 1.4 m/s/s. If he started from rest in what distance would he reach a speed of 7 m/s?

30. The velocity versus time graph below shows a moving object in a straight path. Find average accelerations during the three different phases and explain what the object is doing for all of those phases.

55. A parachutist is descending at a speed of 10 m/s and loses a shoe at an altitude of 50 m.

a. When does the shoe reach the ground?

b. What is the velocity of the shoe just before it hits the ground?

Answers:

9. 10.1 km

11. 42881 m

13. ----

19. yes a car that is slowing down or coming to a stop

21. 8.6 m/s

23. 24 m/s

27. 108 m

29. 17.5 m

30. a.) 0

b.) 1.4 m/s/s

c.) 0 m/s/s

55. a.) 2.33 s

b.) -32.9 m/s