Science 10 Unit Review Physics

Complete the following questions from your textbook:

Pg 410-411 #1, 2, 3, 7, 8, 9,10,11,12,14

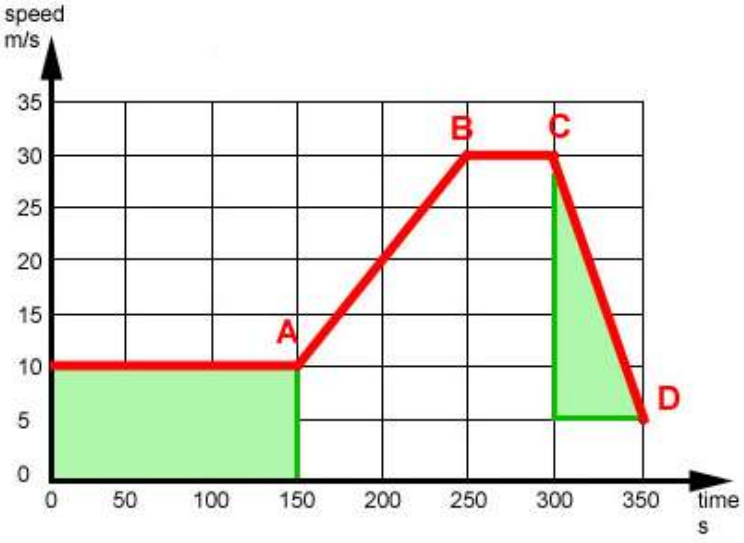
1. A runner covers the last straight stretch of a race in 4 s. During that time, he speeds up from 5 m/s to 9 m/s. What is the runner's acceleration in this part of the race?

2. If a sprinter accelerates at 2.2m/s^2 for 2.5s, what is her velocity after this time, assuming that v_1 = 8m/s?

3. What is an objects initial speed if it accelerates at 2.0m/s^2 for 2.3 s and reached a final speed of -50km/h? What is the final speed in m/s?

4. An object accelerates at 9.81m/s^2 when falling. How long does it take an object to change its speed from 4.5m/s to 19.4m/s?

5. Given the following graph calculate



a. The acceleration at A

b. The acceleration from A to B

c. The acceleration from B to C

d. The acceleration from C to D

e. The Distance from 0s to 150 seconds

6. a. Given the following table showing the acceleration of a motorcycle, create a velocity time graph then answer the following questions:

Time (sec)	Velocity(m/s)
0	0
1	25
2	50
3	75
4	100
5	125

b. What is the total acceleration?

c. What is the total distance travelled?