

The problems are assigned from your book unless described. Some of the problems may have additional questions

1. Solve:

- a. Problem 2.67
- b. Q1: Draw the position-time , velocity-time and acceleration-time graphs for the car.

2. Solve:

- a. Problem 2.70
- b. Q1: Draw the position-time , velocity-time and acceleration-time graphs for the motorist.

3. Solve:

- a. Problem 2.74
- b. Q1: Draw the position-time for the rocket and the bolt in the same graph!
Repeat this for the acceleration time and velocity time graphs.

Hint: The problem consists of two phases AB: Acceleration of the rocket, and BC free fall of bolt. The final quantities for phase AB are the initial quantities of phase BC. No one equation will give you the answer. Assume an acceleration for the rocket as “a” and write down the equations for both phases(specifically the velocity equation for phase AB, distance equation for phase AB and phase BC) and eliminate unknowns.

4. Problem 3.33

5. Passage Problems 3.78-3.82

6. 3.29