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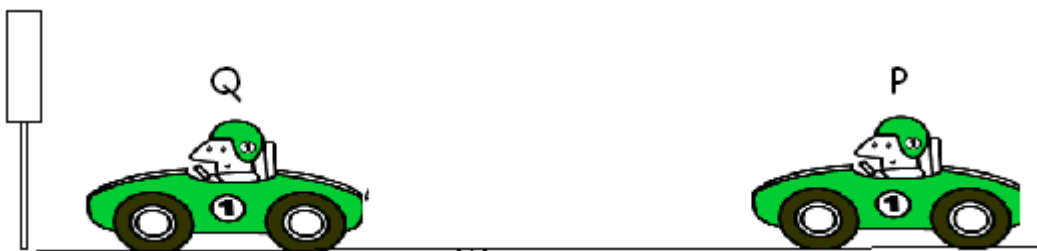
EXERCISE 2.1: Linear motion

1.



Muthu cycles from his house to the shop. While coming back, he stops at Ahmad house. What is his displacement from his house?

2. A student takes 2 minutes to run 800 m. what is his average speed in m s^{-1} ?
3. An aeroplane travels 6 km due west in 1 minute. Then it changes its direction to south and travels 8 km in 2 min 20 s. Find its average velocity in m s^{-1} .
4. A motorcycles is moving with velocity 10 m s^{-1} and reach velocity of 25 m s^{-1} after 3 s. What is its acceleration?
5. A van moves up a slope at an initial velocity of 20 m s^{-1} . It stops after 8 s. What is its acceleration?
6. A bus moves with constant acceleration along a straight road at an initial speed of 5 m s^{-1} from town P to town Q in 2 minutes. If the distance between town P and town Q is 1.5km, what is the velocity of the bus at town Q?
7. A skier slides down hill with uniform acceleration. He starts from rest and attains a speed of 12 m s^{-1} after traveling 18 m. Find his acceleration.
- 8.



Car P travels at 10 m s^{-1} and it is 19 m from car Q when traffic light turn red. The motorist from car P has the reaction time of 0.06 s. When the brakes of car P is applied fully, the car decelerates at 5.0 m s^{-2} .

- (i) How far has P traveled during the reaction time?
- (ii) Find the distance traveled when the brakes are applied. Will car P collide with car Q? How far from Q will P stop?