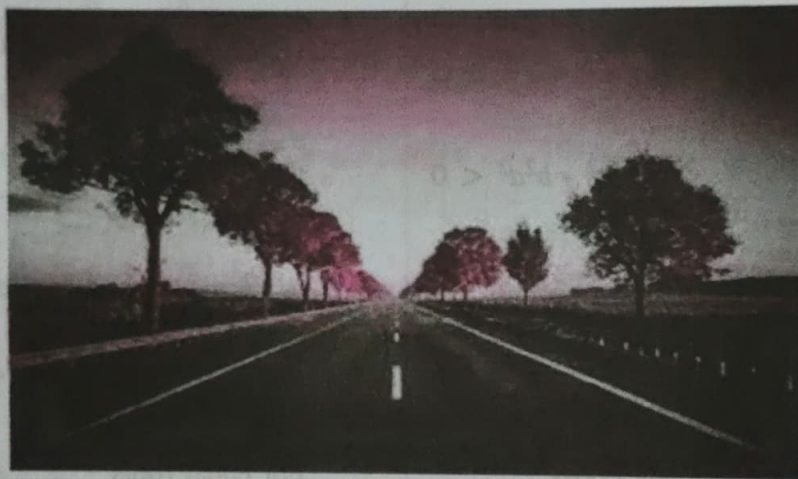


1.

Case Study

Raj and Ajay are very close friends. Both the families decide to go to Ranikhet by their own cars. Raj's car travels at a speed of x km/h while Ajay's car travels 5 km/h faster than Raj's car. Raj took 4 hours more than Ajay to complete the journey of 400 km.

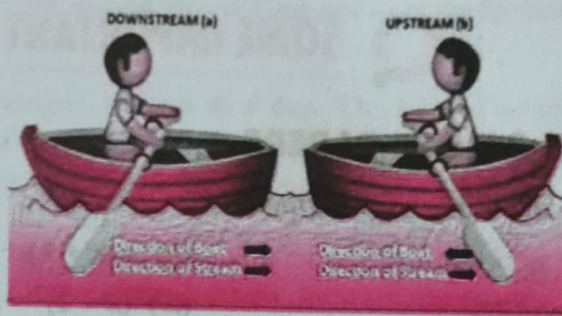
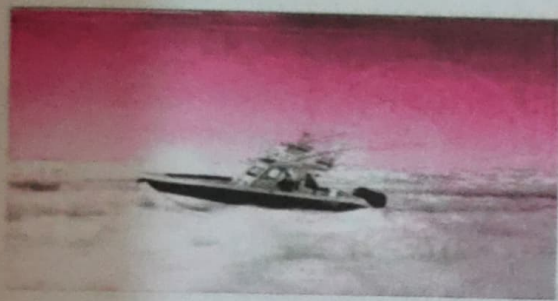


- (a) What will be the distance covered by Ajay's car in two hours ?
- (b) Write the quadratic equation describing the speed of Raj's car ?
- (c) What is the speed of Raj's car ?
- (d) How much time took Ajay to travel 400 km ?
- (e) How much time took Raj to travel 400 km ?

(C.B.S.E. Q.B. 2021)

2. Case Study

The speed of a motor boat is 20 km/hr. For covering the distance of 15 km the boat took 1 hour more for upstream than downstream.



- (a) Let speed of the stream be x km/hr, then find the speed of the motorboat in upstream.
- (b) What is the relation between speed, distance and time?
- (c) Find the quadratic equation for the speed of the current.
- (d) What is the speed of current?
- (e) How much time boat took in downstream?

(C.B.S.E. Q.B. 2021)