Cosmo School

Work Sheet
Class -7
Subject-Mathematics
Chapter-2
Topic- Problems Related to Speed
Date 15/08/2020

Still Water: If the speed of the water is zero, i.e. water is stationary, then it is called still water.

Stream: The moving water in the river is known as a stream.

Upstream: If a boat or a swimmer moves in the opposite direction of the stream, then it is called upstream.

Downstream: If a boar or a swimmer moves in the same direction of the stream, then it is called downstream

Important information	Example
The speed of the boat in still water is called the actual speed of the boat	A boat can travel 4 km per hour in still water. Therefore, the actual speed of the boat is 4 km
1.Effective speed of a boat along with the current (Downstream)=Actual speed of boat +Speed of Stream 2.Effective speed of a boat against the current (Upstream) =Actual speed of boat -Speed of Stream	A boat can travel 9 km per hour in still water. Speed of stream is 6 km per hour 1.Effective speed of a boat along with the current (Downstream) = (9+6) =15 km/hr. 2. Effective speed of a boat against the current (Upstream) = (9-6) =3km/hr.
Velocity = $\frac{\text{Distance}}{\text{Time}}$	A boat can travel 20 km in 4 hours. So, the velocity of the boat = $\frac{20}{4}$ $= 5\text{km/hr}$
A train passing bridge/platform=length of bridge/platform+ length of train	A train of length 130-meter passes through a bridge of length 320 meters, So total distance = (130+320) meters = 450 meters

To cross a pillar /pole the train has to pass the distance equal to its length	A train of length 60-meter passes through a pole with 4 seconds. So, Distance= 60 meter.

Practice Work at Home

1.A 50-metre-long train travels at speeds of 36km per hour. In how many seconds the train will pass a pole at the side

2.The speed of 100 meters long train is 48 km per hour. That train crosses a bridge in 21 seconds. What is the length of the bridge?

3.Atrain 150 meters long takes 30 seconds to cross a bridge 250 meter long. What time will the train takes to cross a platform of 130 meter long?

4.A boat covers a distance of 40 km in 4 hours along the current. If the speed of the boat in still water be 8 km per hour. What is the speed of the river current?

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