

TIME, SPEED & DISTANCE

Complete SSC CGL Examination Notes

Original Educational Content • Created by GovtExamPrep

1. BASIC FORMULAS

Fundamental Relationships

Speed = Distance/Time

Time = Distance/Speed

Distance = Speed × Time

1 km/hr = (5/18) m/s

1 m/s = (18/5) km/hr

Average Speed

When time same: Average Speed = $(S_1 + S_2)/2$

When distance same: Average Speed = $2S_1S_2/(S_1 + S_2)$

For multiple speeds: Avg Speed = Total Distance/Total Time

2. RELATIVE SPEED

Important Cases

Case	Relative Speed	Time to meet
Same direction	$ S_1 - S_2 $	Distance/Relative Speed
Opposite direction	$S_1 + S_2$	Distance/Relative Speed
Circular track (same)	$ S_1 - S_2 $	Circumference/Relative Speed
Circular track (opposite)	$S_1 + S_2$	Circumference/Relative Speed

3. TRAIN PROBLEMS

Key Formulas

Time to cross pole = Length of train/Speed

Time to cross platform = (Length of train + Platform length)/Speed

Time to cross another train = $(L_1 + L_2)/(S_1 \pm S_2)$

Time for trains in same direction = $(L_1 + L_2)/(S_1 - S_2)$

Time for trains in opposite direction = $(L_1 + L_2)/(S_1 + S_2)$

4. BOATS AND STREAMS

Basic Terms

Speed downstream = Boat speed + Stream speed

Speed upstream = Boat speed - Stream speed

Boat speed = (Downstream + Upstream)/2

Stream speed = (Downstream - Upstream)/2

Time, Speed & Distance - SSC CGL Complete Notes

Original Educational Content • Created by GovtExamPrep

 Print PDF