Trains

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SKILOGIC

- Conversion
- Distance formula
- Relativity
- Train Theory

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Conversion

- KMPH to m/s
- 18/5 or 5/18 ?
- KMPH => m/s
- 1000 m = 1 Km
- Per Hour = 3600 m/s
- X KMPH to Y m/s ?
- Y = X * 1000/3600

  = X* 5/18

KMPH to m/s = > Multiply by 5/18

m/s to KMPH = > Multiply by 18/5

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Distance formula

- Velocity = Distance/ time
- S = D /T
- D = ST

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Relativity

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- Same Direction = x – y
- Opp. Direction = x + y

Train Theory

- Always look for back edge of the train

- **Case 1** : Pole/Person/Tree

  Distance Travelled = Length of train

- **Case 2 :** platform/Tunnel/building/bridge

  Distance Travelled = Length of train + length of P/T/B

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When will train cross each other?

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Train Theory

$$t_o = \frac{a+b}{u+v}$$

$$t_s = \frac{a+b}{u-v}$$

SKILOGIC

- A train running at the speed of 60 km/hr crosses a pole in 9 seconds. What is the length of the train?

- A train 125 m long passes a man, running at 5 km/hr in the same direction in which the train is going, in 10 seconds. The speed of the train is?

- The length of the bridge, which a train 130 metres long and travelling at 45 km/hr can cross in 30 seconds, is?

- A train passes a station platform in 36 seconds and a man standing on the platform in 20 seconds. If the speed of the train is 54 km/hr, what is the length of the platform?

- Two trains of equal length are running on parallel lines in the same direction at 46 km/hr and 36 km/hr. The faster train passes the slower train in 36 seconds. The length of each train is?

- Two trains are moving in opposite directions @ 60 km/hr and 90 km/hr. Their lengths are 1.10 km and 0.9 km respectively. The time taken by the slower train to cross the faster train in seconds is?

- A jogger running at 9 kmph alongside a railway track in 240 metres ahead of the engine of a 120 metres long train running at 45 kmph in the same direction. In how much time will the train pass the jogger?