TRAINS

(1) If a certain distance is covered at 'x' km/hr and the same distance is covered at y km/hr

then the **average speed** during the whole journey is $\frac{2xy}{(x+y)} km/hr$

(2) When a train passes a platform it should travel the length equal to the sum of the lengths of TRAIN & PLATFORM both.

(3) When two trains are moving in SAME direction , the relative speed is difference of their speeds.

(4) When two trains are moving in OPPOSITE directions , their speeds should be ADDED to find the relative speed.

(5) Two trains of length 'a' and 'b' meters are moving in the same direction at 'x' m/s & 'y' m/s respectively , then time taken by the faster train to cross the slower train

(let x > y) is given by $\frac{(a+b)}{(x-y)} sec$

(6) Two trains of length 'a' and 'b' meters are moving in the OPPOSITE direction at 'x' m/s

& 'y' m/s respectively , then time taken by the trains to cross each other is given by

$\frac{(a+b)}{(x+y)} sec$

(7) Time of rest / hour = $\frac{[difference\ of\ average\ speed\ ]}{[speed\ without\ stoppages]}$