

## SSC CHSL Average Quick Maths Formulas

1. Average = (Total of data) / (No. of data)
2. Age of New Entrant = New Average + No. of Old Members \* Increase
3. Weight of New Person = Weight of Removed Person + No. Of Persons \* Increase In Average
4. Number of Passed Candidates = Total Candidates \* (Total Average – Failed Average) / (Passed Average – Failed Average)
5. Number of Failed Candidates = Total Candidates \* (Passed Average – Total Average) / (Passed Average – Failed Average)
6. Age of New Person = Age of Removed Person – No. of Persons \* Decrease in Average Age
7. Average after x innings = Total Score – Increment in Average \* y innings

8. If a person travels a distance at a speed of  $x$  km/hr and the same distance at a speed of  $y$  km/hr, then the average speed during the whole journey is given by  $\frac{2xy}{x+y}$  km/hr.
9. If half of the journey is travelled at a speed of  $x$  km/hr and the next half at a speed of  $y$  km/hr, then average speed during the whole journey is  $\frac{2xy}{x+y}$  km/hr.
10. If a man goes to a certain place at a speed of  $x$  km/hr and returns to the original place at a speed of  $y$  km/hr, then the average speed during up and down journey is  $\frac{2xy}{x+y}$  km/hr.
11. If a person travels 3 equal distances at a speed of  $x$  km/hr,  $y$  km/hr and  $z$  km/hr respectively, then the average speed during the whole journey is  $\frac{3xyz}{xy+yz+zx}$  km/hr.
12. If decrease in average =  $x$   
Increase in expenditure =  $y$   
Increase in no. of students =  $z$   
And number of students (originally) =  $N$ , then  
The original expenditure =  $N * [x*(N+z) + y] / z$