Averages

`100,200,300,400...900`

when difference between the terms is constant `middle term` is the average.

$$avg = \frac{first + last}{2}$$

when they have given an average and given some numbers and a X

- **find how far every number is away from the Averages.**
- **add it and the x is going to be that many times bigger than average.**

when there is miscalculation

- **find how much they are off by and divide by the number they have given then subtract or add it depending upon if the miscalculation was more or less respesctive.**

when average of age y is given, say x years ago

- **their current average is y+x.**

when they have given the average and someone leaves.

- `there are 2 possibilities`

    - tthe average either `reduces` or `increases`
        - if it `reduces` then `person who left` had `more than the average` .
        - if average `increases` then `person who left` had `less than the average`
- their `value` is going to be

$$value = rest * amountOfAverageChange$$

LAST RESORT IS TO CHECK OUT OPTION AND TRY TO SIMLUATE

- example

18. There is a cricket team of 11 members. The captain was 26 years old and the wicket keeper 3 years older. When they both were removed, average of the remaining members reduced by 1 year. Find the initial average of the team.

a) 23 years b) 24 years
c) 25 years d) 24.5 years

- isme check out option and simulate the things they saying