Example 2

Thursday, April 1, 2021 11:45 AM

Ex. To solve consecutive numbers, we will use exact mid concept mid is average exactmid

$$= \frac{\text{Number of terms} + 1}{2}$$

i.e. exact mid of 6 terms $= \frac{6+1}{2} = 3.5$

3.5 means between 3rd and 4th numbers.

exact mid of 9 terms $= \frac{9+1}{2} =$ 5th term

Ex. Average 5 consecutive terms is 43. So find smallest.

Exact mid of 5 terms $= \frac{5+1}{2} = 3.$

1 2 3 4 5

↳ (41) 42 43 44 45

Ans.

Sum of Consecutive terms.:

= 1st term + last term

Ex: find out average no. from 20 to 90 which is divisible by 3.

→ $\frac{21+90}{2} = \frac{111}{2} = 55.5$,,

Ex: Divisible by 8 from 20 to 90

$= \frac{24+88}{2} = 56.$

Ex: Divisible by 6

$= \frac{24+90}{2} = 57$,,

Ex: Average of 5 no. 21. one no. is excluded then average becomes 20. what is the excluded no.?

→ if excluded no. is 21, then there will be no change in average.

new average is 20. Avg decreased by

$= 21 - 20 = 1$

total decreased $= 1 \times 4 = 4$ //

So, excluded no. is $= 21 + 4 = 25$ //

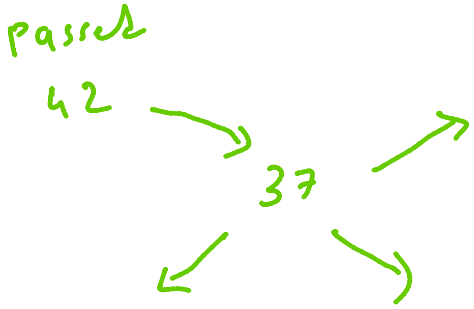
Ex 2 The average of 12 no. is 45. one no. is excluded new average becomes 46. find excluded no.?

increased average $= 46 - 45 = 1$.

total increased $= 11 \times 1 = 11$.

excluded no. $= 45 - 11 = 34$ //

Ex 3: The average marks obtained by 120 students was 37. If average of passed candidate was 42 and failed candidate was 18. find the number of candidate who was failed?

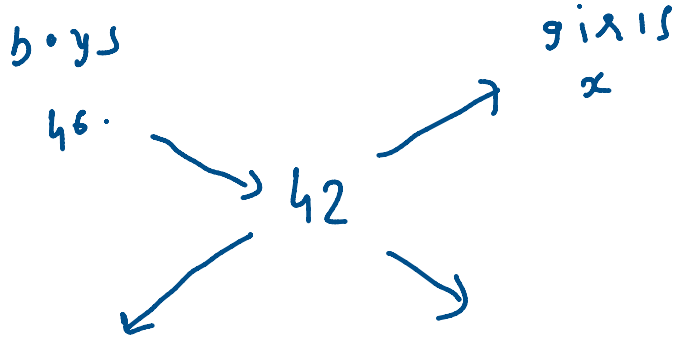


19 : 5

failed students $= 120 \times \frac{5}{24} = 25$

passed " $= 120 \times \frac{19}{24} \doteq 95$ } 120 //

Ex: The average score of class of boys and girls in the examination is 42. The ratio of boys and girls is 3:2. If average score of boys is 46. Find average of girls?

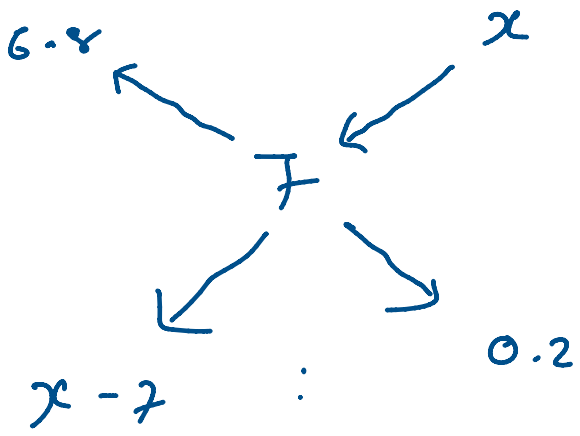


$$\frac{42-x}{4} = \frac{3}{2} \Rightarrow x = 42 - 6 = 36 //$$

Ex: In the first 10 overs. the run rate was 6.2. what should be the run rate of remaining 40 overs to reach the target 350 runs?

40 overs to reach the target 350 runs ?

Total runrate $= \frac{350}{50} = 7$ //



$\frac{10}{40}$

$$\frac{x-7}{0.2} = \frac{10}{40} \Rightarrow x = 7.05$$

Ex: In a school with 300 students. the average age of boys is 16 years and girls is 14 years if the average age of class is 14 years 6 months then find no. of boys in the school.?