

# Bank Written Math Preparation

**Lec. 03**

**Average & Fraction**

**Learn Today, Lead Tomorrow**

FOR ADMISSION:  
01713289149

1. Shakib has thrice the money Malek has and Malek has 25% more money than Habib. If the average money of the three is Tk. 380, what is the amount that Sakib has?  
Ans : Tk. 600
2. The average age of 6 men, 8 women and 1 boy is 35 years. If the average of the men is 40 years and the average of the women is 34 years. What is the age of the boy? (IFIC Bank : TSO – 2018)  
Ans : 13 years
3. Average mark obtained by 300 students in a class is 80. When 10% of the students are excluded from the group, the average mark of remaining students is 85. Find average mark of the 10% of students excluded from the group.  
(Bank Asia – 2016)  
Ans : 35 marks
4. A worker is paid Tk.  $x$  per hour for the first 5 hours he works each day. He is paid Tk.  $y$  per hour for each hours he works in excess of 5 hours. During one week, he works 8 hours on Saturday, 11 hours on Sunday, 12 hours on Monday, 10 hours on Tuesday and 9 hours on Wednesday. What is his average daily wage in Taka for five days of week? (PKB : AM – 2009)  
Ans :  $5(x + y)$
5. The average of the annual incomes of Jamil and Kalam, Kalam and Azad, and Azad and Jamil is Tk. 38,000, Tk. 48,000 and Tk. 58,000 respectively. What is the average income of Jamil and Kalam and Azad?  
(Dhaka Bank : TCO – 2016)  
Ans : Tk. 48,000
6. The average weight of three men A, B and C is 84 kg. Another man D joins the group and the average now becomes 80 kg. If another man E, whose weight is 3 kg more than that of D replaces A, then the average weight of B, C, D and E becomes 79 kg. The weight of A is: (Janata Bank : EO – 2017)  
Ans : 75 kg
7. The H.C.F and L.C.M of two numbers are 21 and 4641 respectively. If one of the numbers lies between 200 and 300, the two number are-  
Ans : 273, 357
8. দুইটি সংখ্যার ল.সা.গু ও গ.সা.গু যথাক্রমে ৪৬৪১ এবং ২১। একটি সংখ্যা ২০০ ও ৩০০ এর ভেতর অবস্থিত হলে, অপর সংখ্যাটি কতো? (20, 34 BCS written)  
Ans : 357
9. In a certain class,  $\frac{1}{2}$  of the male and  $\frac{2}{3}$  of the female students speak English. If there are  $\frac{3}{4}$  as many females as males in the class, what fraction of the entire class speaks English? (AB Bank : PO – 2002)  
Ans :  $\frac{4}{7}$
10. At a football game,  $\frac{4}{5}$  of the seats in the lower deck obtuse stadium was sold. If  $\frac{1}{4}$  of all the seating in the stadium is located in the lower deck, and if  $\frac{2}{3}$  of all the seats in the stadium were sold, then what fraction of the unsold seats in the stadium was in the lower deck? (City Bank : MTO – 2018)  
Ans :  $\frac{3}{20}$
11. A bicycle costs Tk. 2,500 when it is brand new. At the end of the year it is worth  $\frac{4}{5}$  of what it was at the beginning of the year. What is the bicycle worth when it is 3 years old? (HBFC : SO – 2007)  
Ans : Tk. 1,280
12. In a group consisting of 40 people 24 were female and the rest were male. Half of the members were smokers and the rest were non-smokers. If  $\frac{1}{3}$  rd of the female members were smokers, how of the male members were non-smokers? (Pubali Bank Ltd. – 2000)  
Ans : 4

13. Tanim bought some oranges. He gave  $\frac{1}{2}$  of them to his sister,  $\frac{1}{4}$  of the remainder to his neighbor,  $\frac{3}{5}$  of those left to his children and had 6 left in the end. How many oranges did Tanim buy?

(Bangladesh Bank : AD – 2010 ; MTB : MTO – 2019)

Ans : 40

14. In a certain school, 40 more than  $\frac{1}{3}$  of all the students are a science course and  $\frac{1}{4}$  of those taking a science courses are taking physics. If  $\frac{1}{8}$  of all the students in the school are taking physics, how many students in the school?

(ICBL : Officer – 2011)

Ans : 240

15. In a certain class,  $\frac{1}{5}$  of the boys are shorter than the shortest girl in the class and  $\frac{1}{3}$  of the girls are taller than the tallest boy in the class. If there are 16 students in the class and no two people have the same height, what percent of the students are taller than the shortest girl and shorter than the tallest boy? (Sonali Bank : Officer – 2018)

Ans : 62.5%

16. In an office  $\frac{1}{3}$  of the worker are women,  $\frac{1}{2}$  of the women are married and  $\frac{1}{3}$  of the married women have children. If  $\frac{3}{4}$  of the men are married and  $\frac{2}{3}$  of the married men have children, what part of the workers have no children?

(Janata Bank : EO – 2017)

Ans :  $\frac{11}{18}$

17. If the numerator of fraction is increased by 200% and the denominator is increased by 350%. The resultant fraction is  $\frac{5}{12}$ . What was the original fractions? (Bangladesh Bank : AD – 2019)

Ans :  $\frac{5}{8}$

### Questions for Practice

18. A car owner buys petrol at Tk. 75, Tk. 80 and Tk. 85 per liter for three successive years. What approximately is the average cost per liter of petrol if he spends Tk. 40000 each year in this concern?

Ans.: 79.79 (Approximately)

19. Of the three numbers, the first is twice the second and the second is twice the third. The average of the reciprocal of the numbers is  $\frac{7}{72}$ . The numbers are?

Ans.: 24, 12 and 6.

20. A coaching institute has students in three batches- X, Y and Z. In a certain examination, the average marks obtained by these batches are 72, 60 and 50 respectively. The average marks of the X and Y taken together is 69. If the ratio of the number of students in batches Y and Z is 6:7, What is the average score of all the three batches put together?

Ans.: 64.7.

21. The average age of students of a class is 15.8 years. The average age of boys in the class is 16.4 years and of the girls is 15.4 years. Find the ratio of number of boys to the number of girls in the class.

Ans.: 2:3

22. 30 pens and 75 pencils altogether were purchased for Tk. 510. If the average price of a pencil was Tk. 2, what was the average price of a pen?

Ans.: Tk. 12

23. The average of nine numbers is 50. The average of the first five numbers is 54 and that of the last three numbers is 52. Then the sixth number is:

Ans.: 24.

24. Three numbers which are co-prime to each other are such that the product of the first two is 551 and that of the last two is 1073. The sum of the three number is.

Ans.: 85.

25. 21 mango trees, 42 apple trees and 56 orange trees have to be planted in rows such that each row contains the same number of trees of one variety only. Minimum number of trees of one variety only Minimum number of rows in which trees may be planted is-

Ans.: 17.

26. A cycle costs Tk. 250 when it is brand new. At the end of each year it is worth  $\frac{4}{3}$  of what it was at the beginning of the year. What is the cycle worth when it is 3 years old? [Bank Asia MTO 05]

Ans.: Tk. 128.

27. From a number of apples, a man sells half the number of existing apple plus 1 to the first customer, sells  $\frac{1}{3}$ rd of the remaining apple plus 1 to the second consumer, and sells  $\frac{1}{5}$ th of the remaining apple plus 1 to the third consumer. He then finds that he has 3 apples left. How many apples did he have originally? [Uttara PO- 18]

Ans.: 20.

28. In a city, the ratio of private homes to apartment houses is 5:3. If all the apartment houses are brick structures and  $\frac{1}{10}$ th of the private homes are wooden structures, what is the portion of the total houses that is made of brick?

[City Bank Officer 96]

Ans.:  $\frac{15}{16}$

29. The sum of the numerator and denominator of a positive fraction is 11. If 2 is added to both numerator and denominator, the fraction is increased by  $\frac{1}{24}$ . The difference of numerator and denominator of the fraction is-

Ans.: 1.

30. If two empty Jars A and B with different Capacities with equal amounts of Water  $\frac{1}{4}$  of the jar A is filled and  $\frac{1}{3}$  of the jar B is filled. If the water in the Jar with the lesser capacity is then poured into the jar with greater capacity. What fraction of the larger Jar will be filled with Water? [Bangladesh Commerce Bank Officer 06]

Ans.:  $\frac{1}{2}$

----- **Thank You** -----