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AVERAGES AND WEIGHTED AVERAGES



POINTS TO REMEMBER

1) Average = (Sum of observations/Number of observations)

2) Average Speed:

Suppose a man covers a certain distance at X kmph and an equal distance at Y kmph. Then, the average speed during the whole journey is $\{2xy/(x+y)\}$ kmph.

3) WEIGHTED AVERAGE

The average between two sets of numbers is closer to the set with more numbers.



PROBLEM 1:



1. The average of first 10 even numbers is ?

- a) 18
- b) 22
- c) 9
- d) 11

ANS: d) 11



PROBLEM 2:



The average of first ten prime numbers which are odd is

- a) 12.9
- b) 13.8
- c) 17
- d) 15.8

ANS: d.) 15.8



PROBLEM 3:



The average of first 10 natural numbers is?

- a.) 5
- b.) 5.5
- c.) 6.6
- d.) 6

ANS: b.) 5.5



PROBLEM 4:



The average of first 10 odd numbers is?

- a.) 11
- b.) 10
- c.) 17
- d.) 9

ANS: b.) 10



PROBLEM 5:



The average of 11 numbers is 10.9. If the average of first six is 10.5 and that of the last six is 11.4 the sixth number is ?

- A. 11.0
- B. 11.3
- C. 11.4
- D. 11.5

ANS: D) 11.5



PROBLEM 6:



The average of 20 numbers is zero. Of them, at the most, how many may be greater than zero?

- A. 0
- B. 1
- C. 10
- D. 19

ANS: d) 19



PROBLEM 7:



The average weight of 8 person's increases by 2.5 kg when a new person comes in place of one of them weighing 65 kg. What might be the weight of the new person?

- a) 76 kg
- b) 76.5 kg
- c) 85 kg
- d) None of these

ANS: c) 85 kg



PROBLEM 8:



The average monthly income of P and Q is Rs. 5050. The average monthly income of Q and R is Rs. 6250 and the average monthly income of P and R is Rs. 5200. The monthly income of P is:

- a) 3500
- b) 4000
- c) 4050
- d) 5000

ANS: b) 4000



PROBLEM 9:



The average weight of A, B and C is 45 kg. If the average weight of A and B be 40 kg and that of B and C be 43 kg, then the weight of B is:

- a) 17 kg
- b) 20 kg
- c) 26 kg
- d) 31 kg

ANS : d) 31 kg



PROBLEM 10:



The average weight of 16 boys in a class is 50.25 kg and that of the remaining 8 boys is 45.15 kg. Find the average weights of all the boys in the class

- a) 47.55 kg
- b) 48 kg
- c) 48.55 kg
- d) 49.25 kg

ANS: c) 48.55 kg



PROBLEM 11:



A class of 25 students took a science test. 10 students had an average (arithmetic mean) score of 80. The other students had an average score of 60. What is the average score of the whole class?

- a) 68
- b) 72
- c) 52
- d) None of these

ANS: a) 68



PROBLEM 12:



A batsman in his 17th innings makes a score of 85 and their by increasing his average by 3. What is his average after the 17thinnings?

- a) 34
- b) 35
- c) 36
- d) 37

ANS: d) 37



PROBLEM 13:



A man purchased 3 blankets @ Rs.100 each, 5 blankets @ Rs.150 each and two blankets at a certain rate which is now slipped off from his memory. But he remembers that the average price of the blankets was Rs.150. Find the unknown rate of two blankets?

- a) Rs.150
- b) Rs.225
- c) Rs.250
- d) None

ANS: d) None



PROBLEM 14:



Nine men went to a hotel. Eight of them spent Rs.3 each over their meals and the ninth spent Rs.2 more than the average expenditure of all the nine. Determine the total money spent by them ?

- A. Rs.29.25
- B. Rs.30.25
- C. Rs.32
- D. Rs.35

ANS: a) Rs.29.25



PROBLEM 15:



The average of 11 results is 50, if the average of first six results is 49 and that of the last six is 52. Find the sixth result?

- A. 46
- B. 56
- C. 34
- D. 57

ANS: B) 56



PROBLEM 16:



The average salary of a person for the months of January, February, March and April is Rs.8000 and that for the months February, March, April and May is Rs.8500. If his salary for the month of May is Rs.6500, find his salary for the month of January?

- A. 3000
- B. 2500
- C. 4500
- D. 5000

ANS: c) 4500



PROBLEM 17:



The average of 35 numbers is 25. If each number is multiplied by 5, find the new average ?

- A. 125
- B. 134
- C. 170
- D. 98

ANS: A) 125



PROBLEM 18:



The average of the marks of 12 students in a class is 36. If the marks of each student are doubled, find the new average ?

- A. 72
- B. 45
- C. 37
- D. 79

ANS: A) 72



PROBLEM 19:



The sum of five numbers is 655. The average of the first two numbers is 85 and the third number is 125. Find the average of the two numbers?

- A. 180
- B. 170
- C. 190
- D. 175

ANS: A) 180



PROBLEM 20:



The average runs scored by a batsman in 20 matches is 40. In the next 10 matches the batsman scored an average of 13 runs. Find his average in all the 30 matches?

- A. 31
- B. 29
- C. 28
- D. 30

ANS: A) 31

