

Q. 1 Find the average of following values : 410, 890, 280, 640, 310

A) 507 B) 504 C) 505 **D) 506**

Q. 2 Find x , if average of the quantities is 80.

Following are the quantities : 94, 89, 36, 82, x

A) 98 **B) 99** C) 97 D) 100

Q. 3 A mechanic repaired five cars, and the repair times were 24, 88, 49, 88, and 33 hours. What was the average repair time?

A) 55.4 B) 54.4 **C) 56.4** D) 57.4

Q. 4 In a music class of five students, the average age is 20 years. One day, a student who is 24 years old leaves the group and is replaced by a new student. Curiously, this change brings down the average age of the group to 19 years. Can you determine the age of the newcomer?

A) 16 years B) 15 years C) 14 years **D) 19 years**

Q. 5 A mathematician is experimenting with some numbers. He realized that average of 20 numbers he selected was zero. Out of these, at most, how many numbers can be greater than zero?

A) 19 B) 20 C) 10 D) 1

Q. 6 A cyclist starts her adventure trip to mountains in Ladakh. She covers the first half of a certain distance at a steady speed of 30 km/hr and picks up pace in the second half, traveling at 50 km/hr. What would her average speed be for the entire journey?

A) 37.5 km/hr B) 40 km/hr C) 45 km/hr D) 42 km/hr

Q. 7 Eight employees decide to track their weight as part of company's health program. Their average weight increases by 2.5 kg when Alex, who weighs 65 kg, is replaced by a new member Bob. What is Bob's weight?

A) 85 kg B) 88 kg C) 90 kg D) 80 kg

Q. 8 The average age of a school group of 15 children is 10 years. Soon, they are joined by five younger kids whose average age is 8 years. What becomes the new average age of this group?

A) 9.5 years B) 9 years C) 10 years D) 8.5 years

Q. 9 Two types of rice are blended to create the perfect mixture for a chef's special dish. One costs Rs. 60 per kg, and the other costs Rs. 90 per kg. They are mixed in the ratio 2:3. What is the cost per kg of this exquisite mixture?

A) Rs. 75 B) Rs. 80 **C) Rs. 78** D) Rs. 85

Q. 10 A class of 50 students has an average score of 72 in a challenging exam. After removing the scores of the top five performers, the remaining 45 students have an average score of 70. Can you determine the average score of the top five students?

A) 90 B) 82 C) 80 D) 85

Q. 11 Find the average of following values : 710, 790, 900, 680, 300

A) 674 **B) 676** C) 675 D) 677

Q. 12 Alex spends \$50 on chocolates costing 50 cents each. Few days later, when the price drops to 30 cents each, Alex spends \$90 on more chocolates. What is the average cost of the chocolates bought?

A) 25 cents B) 30 cents **C) 35 cents** D) 40 cents

Mixture and Alligation Questions: Specialized Case of Averages

Q. 13 A tank is filled with a solution totaling 10,000 gallons, where 5% of it is sodium chloride. If 2,500 gallons of the solution evaporate, what will be the new concentration percentage of sodium chloride in the remaining solution?

A) 1.25% B) 3.75% C) 6.25% **D) 6.67%**

Q. 14 There are eight liters of a solution that contains 45% salt. After some of the water in this solution evaporates while being exposed to sunlight, the concentration of salt increases to 60%. What is the approximate volume of water that has evaporated?

A) 1.2 liters **B) 2.0 liters** C) 2.1 liters D) 6.0 liters

Q. 15 How much water must be added to 10 gallons of 10% brine solution to decrease the concentration to 7 % ?

A) 0-1.5 gal B) 1.5-3 gal **C) 3-4.5 gal** D) 4.5-6 gal

Q. 16 Two copper alloys have varying copper contents. Alloy A weighs 6 kg, and Alloy B weighs 12

kg. An identical amount of each alloy was removed and exchanged; the removed portion from Alloy A was mixed with Alloy B, and the removed portion from Alloy B was mixed with Alloy A. The mixing resulted in two new alloys, both having the same percentage of copper. How much weight was removed from each alloy?

A) 1 kg B) 2 kg C) 3 kg D) 4 kg

Q. 17 A farmer has a large pot holding 60 liters of a milk-and-water mixture. Initially, the ratio of milk to water is 2:1. To adjust the composition for his recipe, he adds some water, changing the ratio to 1:2. How much water does the farmer add?

A) 40 l B) 30 l C) 20 l D) 60 l

Q. 18 A mysterious jar holds a mix of two liquids, A and B, in the ratio 4:3. A mischievous scientist removes 10 liters of the mixture and replaces it with pure liquid B. The new ratio becomes 2:3. What is the original volume of the mixture?

A) 33.33 liters B) 40 liters C) 42 liters D) 45 liters

Q. 19 A barrel contains a flavourful mixture of alcohol and water in the ratio of 3:1. After adding 10 liters of water, the ratio transforms to 2:3. How much alcohol was present in the barrel initially?

A) 6 liters B) 8 liters C) 9 liters D) 10 liters

Q.20 Vishva aims to sell toys an average of 60% of toys in 1st week and second week. But his average in 1st week is 1 toy less than his target and that in 2nd week is 3 toys more than his target. The difference between the total toys sold in both weeks is 20. Total toys aimed to sell by Vishva.

a) 300 toys

b) 250 toys

c) 310 toys

d) 290 toys

e) None of these

Q.21 The average weight of boys in a class of students is 62 kg. While that of girls is 55 kg. The average weight of the entire class is 58 kg. What

is the ratio of the number of boys to number of girls in the class?

a) 5 : 2

b) 3 : 4

c) 5 : 7

d) 6 : 5

e) None of these

Q. 22 There are 56 students attend the JAB class. The JAB sir conducts an economic test out of 100 and then arranged the score in ascending order. He found taht Gopi, who was topper of the JAB class, had slipped to the 23rd position. When he was adding the scores of the last 34 students the average was 74 and that of the top 23 students was 78.If the average score obtained by all the students of his class was 76, how many marks did Gopi score?

a) 73

b) 88

c) 67

d) 54

e) None of these

Q.23) The average of runs scored by a player in 9 innings is 40. How many runs should he score in the 10th innings so that his average is increased by 3 runs?

a) 71

b) 70

c) 65

d) 43

e) 58

Q.24) The average salary of 3 friends X, Y and Z is Rs.12000 a month. If X spends Triple and Z spends double of what Y spend his salary during per month. If average of their saving salary is Rs.8000, then what is the average amount X and Y spend in a month?

a) Rs.4100

b) Rs.3500

c) Rs.4000

d) Rs.5000

e) None of these

Q.25) Ramya purchased 14 balls, 10 dresses and 15 bags. The average price of 14 balls, 10 dresses and 15 bags at Rs.150. If the average price of a bag was Rs.250. The average price of a dress is Rs.75. What is the approximate average price of balls?

a) Rs.80

b) Rs. 72.5

c) Rs. 89.9

d) Rs.96.4

e) None of these

Q.26) Reaka bought 10 kg Orange 6 Dozen bananas, 11 kg Apple and 7 kg Mango. The cost of Orange per kg is Rs.40, 1 dozen banana Rs.25. 1 kg Apple Rs.95. 1 kg mango is Rs.15 more than the combined price of 1kg orange and 1 dozen bananas. Find the approximate average amount spent by Reaka.

a) Rs.45.5

b) Rs.41.3

c) Rs.63.4

d) Rs.76.2

e) Rs.66.5

Q.27) 16 friends went to a restaurant and decided to pay the bill amount equally, but 14 of them could pay Rs.150 each, as a result last two friends pay Rs. 16 extra of the total average amount. Find the amount of average of 16 friends (Approximately)

a) Rs. 141

b) Rs.142

c) Rs.138

d) Rs.140

e) None of these

Q.28) Anjali enters a bakery shop. She buys chocolates, Pastries, Puffs. Totally she buys 26 items. The average cost of 26 items is Rs.190. She has to buy at least 7 units of each, she buys more chocolate than puffs, and more pastries than chocolate. The average price of 1 puff and 1 chocolate is Rs.15 and

Rs.15 respectively. If difference between item of chocolate and pastries is one, then find the amount of one pastry?

a) 430

b) 410

c) 470

d) 310

e) None of these

Q.29) The average of 36 innings of a cricket player is 65 runs excluding first and last innings. His first innings exceeds last innings by 24 runs. If the average of the 38 innings is 68 runs, what is run taken by him in his last innings?

a) 134

b) 124

c) 120

d) 110

e) None of these

Q.30) Four person's checks their weight; the average weight of four persons is 63 kg. If the ratio of the first to the second person's weight is 5: 3, and that of the second to the third person's was 1: 3, and third to the fourth person's weight is 9: 11, then what is the average of the First and third person's weight?

a) 63

b) 60

c) 58

d) 52

e) 55