



Averages Questions for RRB NTPC Set-4 PDF

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Instructions

For the following questions answer them individually

Question 1

If the average of 46, x , 30, 36, 59, 82, 68 and 94 is 56.5, then what is the value of x ?

- A 40
- B 37
- C 29
- D 23

Answer: B

Explanation:

$$\text{Sum of numbers} = 46 + x + 30 + 36 + 59 + 82 + 68 + 94 = (x + 415)$$

$$\text{Average of 8 numbers} = \frac{(x+415)}{8} = 56.5$$

$$\Rightarrow x + 415 = 56.5 \times 8$$

$$\Rightarrow x = 452 - 415 = 37$$

\Rightarrow Ans - (B)

Question 2

The average of 12 numbers is 35. If four numbers 20, 27, 15 and 29 are removed then what will be the average of remaining numbers?

- A 41.125
- B 49.5
- C 52.5
- D 38.375

Answer: A

Explanation:

$$\text{Average of 12 numbers} = 35$$

$$\Rightarrow \text{Sum of numbers} = 35 \times 12 = 420$$

$$\text{Sum of the 4 removed numbers} = 20 + 27 + 15 + 29 = 91$$

$$\Rightarrow \text{New average of 8 numbers} = \frac{(420-91)}{8}$$

$$= \frac{329}{8} = 41.125$$

\Rightarrow Ans - (A)

Question 3

The average weight of X, Y and Z is 35 kg. If the average weight of X and Y is 33 kg and that of Y and Z is 29 kg, then what is the weight (in kg) of Y?

- A 19
- B 23.5
- C 27

D 37

Answer: A

Explanation:

Let weight of X, Y and Z be x, y, z kg respectively.

$$\text{Average weight of X, Y and Z} = \frac{(x+y+z)}{3} = 35$$

$$\Rightarrow x + y + z = 35 \times 3 = 105 \text{ -----(i)}$$

$$\text{Also, average weight of X and Y} = \frac{(x+y)}{2} = 33$$

$$\Rightarrow x + y = 66 \text{ -----(ii)}$$

$$\text{Similarly, } y + z = 58 \text{ -----(iii)}$$

$$\text{Adding equations (ii) and (iii), } \Rightarrow x + 2y + z = 124 \text{ -----(iv)}$$

Subtracting equation (i) from (iv), we get :

$$\Rightarrow y = 124 - 105 = 19$$

\therefore Weight of Y = **19** kg

\Rightarrow Ans - (B)

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Question 4

The average of 7 numbers is 30. If the average of first three numbers is 25 and that of last three numbers is 35, then what is the fourth number?

A 30

B 35

C 37.5

D 40

Answer: A

Explanation:

Average of 7 numbers = 30

$$\Rightarrow \text{Sum of the numbers} = 30 \times 7 = 210$$

$$\text{Now, sum of first 3 numbers} = 25 \times 3 = 75$$

$$\text{Similarly, sum of last 3 numbers} = 35 \times 3 = 105$$

$$\Rightarrow \text{Fourth number} = 210 - (75 + 105) = 210 - 180 = 30$$

\Rightarrow Ans - (A)

Question 5

Among four bags, average weight of last three bags is 18 kg and the average weight of first three bags is 19 kg. If the weight of last bag is 22 kg, then what is the weight (in kg) of first bag?

A 32

B 24

C 33

D 25

Answer: D

Explanation:

Let weight of each bag be a, b, c and 22 kg

Average weight of last three bags = 18 kg

$$\Rightarrow b + c + 22 = 18 \times 3$$

$$\Rightarrow b + c = 54 - 22 = 32 \text{ -----(i)}$$

Also, average weight of first three bags = 19 kg

$$\Rightarrow a + b + c = 19 \times 3 = 57$$

Substituting value from equation (i), $\Rightarrow a + 32 = 57$

$$\Rightarrow a = 57 - 32 = 25 \text{ kg}$$

\Rightarrow Ans - (D)

Question 6

A person bought 100 cars for Rs 40000. If the average price of 60 cars is Rs 500, then what will be the average price (in Rs) of remaining cars?

A 200

B 250

C 300

D 350

Answer: B

Explanation:

Price of 100 cars = Rs. 40,000

Average price of 60 cars = Rs. 500

$$\Rightarrow \text{Total price of 60 cars} = 500 \times 60 = \text{Rs. } 30,000$$

$$\therefore \text{Average price of remaining } (100-60=40) \text{ cars} = \frac{(40,000-30,000)}{40}$$

$$= \frac{10000}{40} = \text{Rs. } 250$$

\Rightarrow Ans - (B)

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Question 7

The average weight of 35 apples is 50 grams. If some apples of weight 40 grams each were removed, then average weight becomes 57.5 grams. How many apples of weight 40 grams were removed?

A 5

B 10

C 15

D 20

Answer: C

Explanation:

Average weight of 35 apples = 50 grams

$$\Rightarrow \text{Total weight of 35 apples} = 50 \times 35 = 1750 \text{ grams}$$

Let n apples of 40 grams of weight were removed, then

$$\Rightarrow \frac{1750 - 40n}{35 - n} = 57.5$$

$$\Rightarrow 1750 - 40n = 2012.5 - 57.5n$$

$$\Rightarrow 57.5n - 40n = 2012.5 - 1750$$

$$\Rightarrow 17.5n = 262.5$$

$$\Rightarrow n = \frac{262.5}{17.5} = 15$$

\Rightarrow Ans - (C)

Question 8

In a committee there are 25 members. If two members whose ages are 64 years and 40 years are replaced by the two new members, then average age of 25 members is decreased by 2 years. What is the average age (in years) of the new members?

A 27

B 32

C 38

D 44

Answer: A

Explanation:

Let average age of 25 members = x years

$$\Rightarrow \text{Total age of 25 members} = 25x$$

Let sum of ages of 2 new members = $2z$, thus average age = $z = ?$

According to ques,

$$\Rightarrow \frac{25x - 64 - 40 + 2z}{25} = x - 2$$

$$\Rightarrow 25x - 104 + 2z = 25x - 50$$

$$\Rightarrow 2z = 104 - 50 = 54$$

$$\Rightarrow z = \frac{54}{2} = 27$$

\therefore Average age of the new members = **27**

\Rightarrow Ans - (A)

Question 9

A boy buys 5 pencils at Rs 3 each, 3 erasers at Rs 2 each and 3 sharpeners at Rs 5 each. What is the average expenditure (in Rs) per article?

A 3.27

B 3.5

C 4

D 5

Answer: A

Explanation:

Price of 5 pencils = $5 \times 3 = \text{Rs. } 15$

Price of 3 erasers = $3 \times 2 = \text{Rs. } 6$

Price of 3 sharpeners = $3 \times 5 = \text{Rs. } 15$

=> Average expenditure = $\frac{15+6+15}{5+3+3}$

= $\frac{36}{11} = \text{Rs. } 3.27$

=> Ans - (A)

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Question 10

In a committee there are 15 members. If two members whose ages are 45 years and 55 years are replaced by the two new members, then average age of 15 members is increased by 2 years. What is the average age (in years) of the new members?

A 59

B 61

C 65

D 68

Answer: C

Explanation:

Let average age of 15 members = x years

=> Total age of 15 members = $15x$

Let sum of ages of 2 new members = $2z$, thus average age = $z = ?$

According to ques,

=> $\frac{15x - 45 - 55 + 2z}{15} = x + 2$

=> $15x - 100 + 2z = 25x + 30$

=> $2z = 100 + 30 = 130$

=> $z = \frac{130}{2} = 65$

∴ Average age of the new members = **65**

=> Ans - (C)

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