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Average Questions for Bank Clerk Mains, and PO Pre Exams.

Average Quiz 11

Directions: Kindly study the following Questions carefully and choose the right answer:

1. In a class with a certain number of students if one new student weighing 50 kg is added, then average weight of class is increased by 1 kg. If one more student weighing 50 kg is added, then the average weight of the class increases by 1.5 kg over the original average. What is the original average weight (in kg) of the class?

A. 46   B. 42   C. 27   D. 47   E. None of these

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2. While purchasing an item that costs Rs. 400, one has to pay sales tax at the rate of 7% and on another item costing Rs. 6400, the rate of sales tax was 9%. The percent of sales tax one has to pay, taking these items together on an average is?

A. $6\frac{13}{16}$ %   B. $7\frac{14}{17}$ %   C. $9\frac{18}{15}$ %   D. $8\frac{15}{17}$ %   E. None of these

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3. The average salary of male employees in a firm was Rs. 6000 and that of females was Rs. 5600. The mean salary of all the employees was Rs. 5800. What is the % of female employees?

A. 60%   B. 50%   C. 70%   D. 20%   E. None of these

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4. The average salary of 65 workers is Rs. 5680 out of which average salary of 31 workers is Rs. 2356 and that of 23 workers is Rs. 4589. What is the average salary of remaining workers?(value in approximate)

A. Rs. 19832   B. Rs. 19732   C. Rs. 17329   D. Rs. 18329   E. None of these

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5. The average sales of a mobile shopkeeper was 15 mobiles per week, to increase the sales he decided to tie up with a finance company for providing mobiles to customers on installment. After the launch of this scheme his average sales increased to 21 mobile per week. The annual percentage increase in the sales of mobile was:

A. 40%   B. 140%   C. $42\frac{6}{7}$ %   D. 39.33%   E. None of these

6. The data given below shows the average monthly expenditure of Mr. Gyanenda Modi.
I. During the first 3 months he spends Rs. 1800.
II. He spends Rs. 1850 during the next 4 months.
III. And Rs. 2720 during the last 5 months of a year.
If the total savings during the year were Rs. 912, then the average monthly income was:

A. Rs. 2605   B. Rs. 2276   C. Rs. 2286   D. Rs. 2905   E. None of these

---

7. In a class of 'x' students, if a new student weighing 30 kg joins the class, then the average weight of the class increases by 1 kg. If the new student's weight is 18 kg, then the average weight of the class decreases by 1 kg. Find 'x'.

A. 4   B. 5   C. 6   D. 7   E. None of these

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8. In a one-day cricket match, Virat the captain of Indian Cricket team scored 94 runs more than the average runs scored by the remaining ten batsmen of the team. If the total runs scored by all the batsmen of the team was 358, then how many runs did Virat score?

A. 97   B. 102   C. 113   D. 118   E. None of these

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9. The average runs of 65 players in IPL season 10 is 90. If top five players are removed, the average drops by 5 runs. If the runs of top five scorers are in consecutive decreasing integers order, then find the run of top scrorer.

A. 148   B. 152   C. 145   D. 155   E. None of these

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10. The average height of 3 boys Bikesh, Sam and Suhas is 208/3 inches while the average height of Bikesh, Vihal and Rakesh is 203/3 inches. What is the average height of Bikesh, Sam, Suhas, Vihal and Rakesh?

A. 65 inches   B. 66 inches   C. $19\dfrac{7}{3}$ inches   D. 64 inches   E. Can't be determined

Correct Answers:

1	2	3	4	5	6	7	8	9	10
D	D	B	C	A	B	B	D	B	E

Explanations:

1. Let x be the number of students in the class and y be the average weight of the class

Now according to question,

$$\frac{xy + 50}{x + 1} = y + 1$$

x + y = 49 .... (i) Again,

$$\frac{xy + 50 + 50}{x + 2} = y + 1.5$$

1.5x + 2y = 97 .... (ii) From equation (i) and (ii), we get y = 47

Hence, option (D) is correct.

2.

Sales tax on the article sold at Rs. 400 = $\frac{400 \times 7}{100}$ = 28

Sales tax on the article sold at Rs. 6400 = $\frac{6400 \times 9}{100}$ = 576

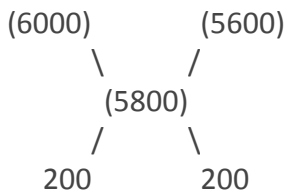Total tax = 28 + 576 = 604

Percentage sales tax = $\frac{604}{6800} \times 100 = \frac{151}{17} = 8\frac{15}{17}\%$

Hence, option (D) is correct.

3. Average salary of male employees = Rs. 6000
Average salary of female employees = Rs. 5600
Mean salary = Rs. 5800
By using allegation

```
   (6000)        (5600)
        \        /
         (5800)
        /       \
    200           200
```

∴ The ratio of male : female = 200 : 200 = 1 : 1

Hence, % of female employees = $\frac{1}{2} \times 100 = 50\%$

Therefore, option (B) is correct.

4.   Total salary of 65 workers = 65 × 5680 = Rs. 369200

Total salary of 31 workers = 31 × 2356 = Rs. 73036

Total salary of 23 workers = 23 × 4589 = Rs. 105547

No. of remaining workers = 65 – 31 – 23 = 65 – 54 = 11

Total Salary of 11 workers = 369200 – 73036 – 105547 = 369200 – 178583 = Rs. 190617

Required average = $\dfrac{190617}{11}$ = 17329 (approx.)

Hence, option C is correct.

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5.   The average rate of percentage increase in both the cases- weekly and yearly will be the same.

Therefore, annual percentage in sales = $\dfrac{21 - 15}{15}$ × 100

= $\dfrac{600}{15}$ = 40%

Hence, option A is correct.

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6.   Total expenditure for the year = [1800 × 3 + 1850 × 4 + 2720 × 5]

= 5400 + 7400 + 13600 = Rs. 26400

Total saving = Rs. 912

Total income = expenses + savings = 26400 + 912 = Rs. 27312

Average income = $\dfrac{27312}{12}$ = Rs. 2276

Hence, option B is correct.

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7.   Let the initial number of students in the class be x

initial average weight of students be A_x.

After the new student weighing 30 kg joins the class,

the number of students becomes x + 1,

and the average weight becomes A_x + 1.

If the new student's weight is 12 kg lesser, that is 18 kg, the new average weight becomes A_x – 1.

∴   A 12 kg reduction in one student's weight causes a 2 kg reduction in the average weight.

∴   The number of students is $\dfrac{12}{2}$ = 6 = x + 1

∴   The number of students present initially = x = 5

Hence, Option B is correct..

8.   Let the average of the runs made by the other 10 batsmen be x.

∴ Runs made by the captain = x + 94

Now, x + 94 + 10x = 358

or, 11x = 264

∴ $x = \dfrac{264}{11} = 24$

∴ Runs scored by Virat = 24 + 94 = 118

Hence, option D is correct.

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9.   Sum of the total runs before removal of top 5 run scorers = 65 x 90 = 5850

Sum of the total runs after removal of top 5 run scorers = 60 x 85 = 5100

Therefore, the runs scored by top 5 players = 5850 - 5100 = 750

Let the runs scored by highest run getter be x.

Therefore, sum of the runs scored by top 5 scorers = x + (x − 1) + (x − 2) + (x − 3) + (x − 4) = 750

 or, 5x = 750 + 10

∴ x = 152

Hence, option B is correct.

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10. Height of 3 boys Bikesh, Sam and Suhas is

$\dfrac{208}{3}$ × 3 = 208 inches.

Height of Bikesh, Vihal and Rakesh is

$\dfrac{203}{3}$ × 3 = 203 inches.

With the help of this information, the height of 5 boys cannot be determined.

Hence, option (E) is correct.