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SBI Clerk Main and RBI Assistant Main Exam 2020

Important PDF of Quantitative Aptitude

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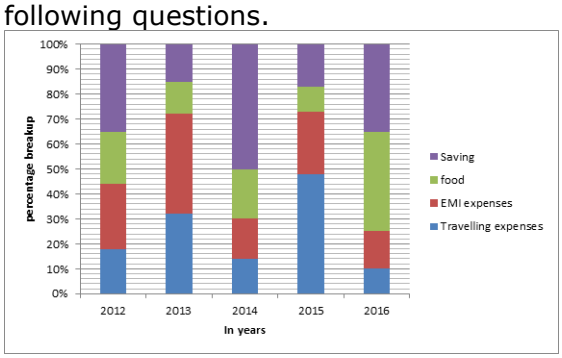
Directions (1 – 5): The following bar graph shows the percentage break-up of a Sunil's salary from year 2012 to 2016. With the given information, find the following questions.



1. If the ratio on saving in the year 2013 and 2016 are in the ratio 3 : 5. Then what is the ratio of EMI expenses in the year 2013 and 2016.
A. 56:5 B. 8:15
C. 56:15
D. Can't be determined
E. none of these

2. If the saving in 2012 is $\frac{4}{5}^{th}$ of the saving in 2014. Then what is the total expenditure spent on food in 2012. (Given that total expense in 2014 is INR 1,85,000)
A. INR 40,400 B. INR 44,400
C. INR 21,100 D. INR 45,100
E. none of these

3. Every year there is an increase of 100% in monthly salary as compared to previous year's monthly salary then what is the ratio of monthly salary in 2016 to the expenses on travelling in 2013.
A. 8:1 B. 1:25
C. 80:3 D. 25:1
E. none of these

4. If the total expenses in year 2011 is INR 3, 00,000 and there is an increase of 18% in 2012. Then how much Sunil has spent on travelling and EMI combine in 2012?
A. INR 1,53,740 B. INR 1,40,330
C. INR 1,50,740 D. INR 92,400
E. INR 1,55,760

5. What approx. percentage of average money spend by Sunil on food to that of average money saved by him during all these years if his salary per annum was INR 5,00,000
A. 65% B. 70%
C. 68% D. 69%
E. 66%

Direction: What will come in place of question mark(?) in the given number series?
6. 720, 144, 36, 12, ?, 6
A. 8 B. 12
C. 9 D. 14
E. 6

Direction: What will come in place of question mark(?) in the given number series?
7. 145, 146, 142, 151, 135, ?
A. 160 B. 154
C. 150 D. 164
E. 165

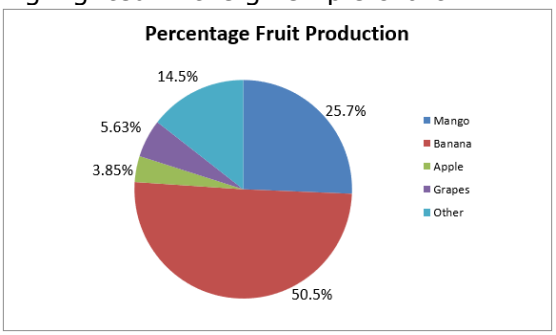
Direction: What should come in place of the question mark '?' in the following number series?
8. -3 , 12 , 57 , 162 , 387 , ?
A. 894 B. 852
C. 893 D. 897
E. 900

Direction: What will come in place of question mark(?) in the given number series?
9. 7, 8, 18, 57, 232, ?
A. 945 B. 860
C. 845 D. 1165
E. 1220

Direction: What will come in place of question mark(?) in the given number series?
10. 18, 41, 60, 77, 90, ?
A. 100 B. 96
C. 104 D. 98
E. 101

Direction (11 – 16) : Read the following information carefully and answer the questions that follow:

The amount of fruits produced in country C was 50000 kilos. The contribution of various fruits to this number has been highlighted in the given pie chart:



11. What is the total weight of Apples and Grapes produced in country C?
A. 1925 kilos B. 2815 kilos
C. 4740 kilos D. 890 kilos
E. None of these

12. If the cost of Mangoes is Rs. 480 per kilo, then what was the total money earned by selling all of the mangoes?
A. Rs. 1285000 B. Rs. 6168000
C. Rs. 5000000 D. Rs. 4876000
E. None of these

13. The Bananas were sold at Rs. 36 per kilo, while the Grapes were sold at Rs. 100 per kilo. The selling price of the all bananas is what percentage more than the selling price of all grapes? (Approximate your answer)
A. 223% B. 150%
C. 340% D. 480%
E. None of these

14. What is the average weight of Apples and Mangoes produced?
A. 1925 kilos B. 12850 kilos
C. 10025.5 kilos D. 7387.5 kilos
E. None of these

15. What is the ratio of the produced weight of Grapes to that of other fruits produced?
A. 1563 : 2450 B. 453 : 747
C. 167 : 1200 D. 447 : 1342
E. 563 : 1450

Direction: In the following questions two equations numbered I and II are given. Solve both the equations and choose the correct answer.

16. I. $x^2 = 7x$
II. $(y + 7)^2 = 0$
A. $x > y$ B. $x \geq y$
C. $x < y$ D. $x \leq y$
E. $x = y$ or relationship between x and y cannot be established

Direction: In the following question, there are two equations. Solve the equations and answer accordingly:
17. I. $8x^2 + 26x = -15$
II. $12y^2 - 20y + 8 = 0$
A. $x < y$ B. $x > y$
C. $x \leq y$ D. $x \geq y$
E. $x = y$ or the relationship cannot be established

Directions: In the following question two equations numbered I and II are given. You have to solve both the equations and answer the question.
18. **I.** $x^3 - 4913 = 0$
II. $y^2 - 289 = 0$
A. $x > y$ B. $x < y$
C. $x \geq y$ D. $x \leq y$
E. $x = y$ or the relation can't be established

Directions: In the following question two equations numbered I and II are given. You have to solve both the equations and answer the question.
19. **I.**$X^2 - 25X + 156 = 0$
II.$Y^2 + 25Y + 156 = 0$
A. $X > Y$ B. $X \geq Y$
C. $Y > X$ D. $Y \geq X$
E. X = Y OR the relationship can not be established

Direction: In the following question two equations numbered I and II are given. You have to solve both the equations and answer the question.
20. I. $x^2 + 11x + 30 = 0$
II. $y^2 + 7y + 12 = 0$
A. $x > y$ B. $x \geq y$
C. $x < y$ D. $x \leq y$
E. $x = y$ or the relationship cannot be established

21. Two numbers are such that the sum of twice the first number and thrice the second number is 36 and the sum of thrice the first number and twice the second number is 39. Which is the smallest number?
A. 9 B. 5
C. 7 D. 3
E. 6

22. A contractor agreed to complete a work in 90 days. He engaged 48 men for the work and after doing the work for 50 days he came to know that three-fifths of the work has already been completed. How many men should he remove to finish the work in the agreed time?
A. 4 men B. 8 men
C. 6 men D. 10 men
E. None of these

23. The average of six consecutive even integers is 37. Find the average of the next five consecutive odd integers.
A. 47 B. 43
C. 45 D. 41
E. None of these

24. A group of girls contributed the money for a trip. Each girl contributed the amount equal to eight times the number of girls they were. The total collection came to Rs 6272. How many girls were there in the group?
A. 28 B. 22
C. 32 D. 18
E. None of these

25. Two pipes A and B can fill a tank in 15 minutes and 10 minutes respectively. Both Pipes A and B work together and it takes 2 extra minutes to fill the tank due to a leak at the bottom. Find out the time which the leak would take to empty the full tank.
A. 30 minutes B. 18 minutes
C. 24 minutes D. 15 minutes
E. None of these

Direction: Given below are two quantities named I and II. Based on the given information, you have to determine the relation between the two quantities. You should use the given data and your knowledge of Mathematics to choose among the possible answers.
26. N is 2-digit number. The product of the digit of N is 21.
Quantity 1: N
Quantity 2: 130 – N
A. Quantity I > Quantity II
B. Quantity I < Quantity II
C. Quantity I ≥ Quantity II
D. Quantity I ≤ Quantity II
E. Quantity I = Quantity II or No relation

Direction: Given below are two quantities named I and II. Based on the given information, you have to determine the relation between the two quantities. You should use the given data and your knowledge of Mathematics to choose among the possible answers.
27. The length of a rectangular wall is 3/2 times of its height. The area of the wall is 96 m ².
Quantity I: $62\frac{1}{2}\%\ of$ Height of the wall.
Quantity II: 50% Length of the wall.
A. Quantity I > Quantity II
B. Quantity I < Quantity II
C. Quantity I ≥ Quantity II
D. Quantity I ≤ Quantity II
E. Quantity I = Quantity II or No relation

Direction: Given below are two quantities named I and II. Based on the given information, you have to determine the relation between the two quantities. You should use the given data and your knowledge of Mathematics to choose among the possible answers.
28. **Quantity I**: A trader gives an additional concession of 35% on an article which is already get discounted by 20% on the marked price. If the buyer pays an amount of 1300 for the article, then find the marked price.
Quantity II: A man sold an article for Rs. 2040 and incurred a loss. Had he sold the article for Rs.2355, his gain would have been equal to half of the amount of loss that he incurred. At what price should he sell the article to have 20% profit?
A. Quantity I > Quantity II
B. Quantity I < Quantity II
C. Quantity I ≥ Quantity II

D. Quantity I ≤ Quantity II
E. Quantity I = Quantity II or No relation

Direction: Given below are two quantities named I and II. Based on the given information, you have to determine the relation between the two quantities. You should use the given data and your knowledge of Mathematics to choose among the possible answers.

29. **Quantity I**: A certain sum of money amounts to rupees 2900 at simple interest 4% per annum in 4 years. In how many years will it amount to rupees 4000 at the same rate?
Quantity II: A work which is completed by 20 men in 8 days can be completed by 25 women 12 days. 16 men and 10 women start doing the work. After 3 days, they leave. If the remaining work is to be completed in 6 days by x number of men, find x.
A. Quantity I > Quantity II
B. Quantity I < Quantity II
C. Quantity I ≥ Quantity II
D. Quantity I ≤ Quantity II
E. Quantity I = Quantity II or No relation

Direction: Given below are two quantities named I and II. Based on the given information, you have to determine the relation between the two quantities. You should use the given data and your knowledge of Mathematics to choose among the possible answers.

30. **Quantity I:** Speed of the train A. if the length of train and a platform are 132m and 183 m respectively and train takes 9 second to cross the platform.
Quantity II: Speed of train B. if it travels 300 km in 3 hr 30 min.
A. Quantity I > Quantity II
B. Quantity I < Quantity II
C. Quantity I ≥ Quantity II
D. Quantity I ≤ Quantity II
E. Quantity I = Quantity II or No relation

31. The average age of Ram and Shyam is 35 years. if Rohan replaces Ram, the average age becomes 32 years and if Rohan replaces Shyam, then the average age becomes 38 years. If the average age of Piyush and Ankit half of the average age of Ram, Shyam and Rohan, then the average age of all the five people is:
A. 27 years B. 28 years
C. 35 years D. 39 years
E. None of these

32. Average age of a family of 4 is 25 years. Average age of the family excluding the youngest member is 30 years and Average age of the family excluding the oldest member is 20 years. Out of the two members left the age of the elder one is 10 less than twice the age of the other. Find the product of the ages of the members of the family.
A. 240000 B. 390625
C. 250000 D. 252525
E. None of these

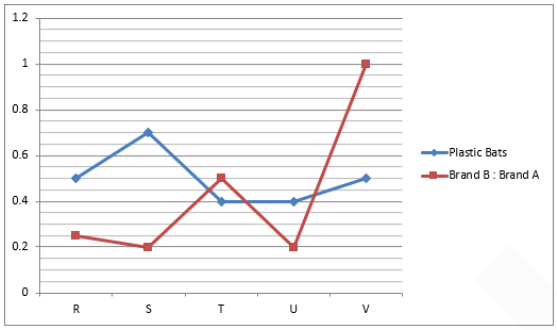
33. Rachita, Rohit and Shubham become partners in a business. They invested Rs. 25000, Rs. 30000 and Rs. 15000 respectively. The profit is shared in proportion to the investements, but Rachita also gets 30% of the profit as salary for managing the business. At the end of the financial year, if Rachita gets Rs. 1200 more than Rohit and Shubham together, what is Shubham's share?
A. Rs. 1000 B. Rs. 1800
C. Rs. 850 D. Rs. 1500
E. None of these

34. Mr Sonkar spends 50% of his monthly income on household items and out of the remaining he spends 50% on transport, 25% on entertainment, 10% on sports and the remaining amount of Rs 900 is saved. What is Mr Sonkar's annual income?
A. Rs 121000 B. Rs 12000
C. Rs 144000
D. Cannot be determined
E. None of these

35. A bus travels at a speed of 80kmph. While traveling from Bus stop A to Bus stop B, which are 64 km apart, it gets stuck in a traffic jam and ends up covering the distance in an hour. For how much time was the bus stuck in the jam?
A. 12 mins B. 14 mins
C. 16 mins D. 18 mins

E. 20 mins

Direction (36 – 40) : The line graph given below shows the information about bats manufactured by 6 different companies. Each company manufactures only plastic & wooden bats. It further labels wooden bats as brand A & brand B. Each company manufactures 550000 bats & line graph shows Plastic bats manufactured as a decimal equivalent ratio of total bats manufactured by each company & the decimal equivalent ratio of wooden bats labeled Brand A & Brand B.



36. What is the ratio of total wooden bats of brand B manufactured by company U to the total wooden bats manufactured by company R & V?
A. 1:10 B. 1:15
C. 2:5 D. 3:8
E. 5:11

37. If 'P' is the sum of wooden bats of brand B manufactured by company S & wooden bats of brand A manufactured by company V & 'Q' is the difference of wooden bats of brand B & brand A manufactured by Company U, then find the difference of Q - P?
A. 10200 B. 55000
C. 54000 D. 109000
E. 75000

38. How many total wooden bats of brand A are manufactured by all the companies?
A. 950000 B. 100000
C. 990000 D. 850000
E. 1200000

39. What is the total number of wooden bats of brand A manufactured by company T?
A. 275000 B. 137500
C. 55000 D. 220000
E. 385000

40. Find X-Y, if X = Average of plastic bats manufactured by Company V & U
and Y = Wooden bats of brand A manufactured by company R.
A. 32000 B. 28000
C. 22400 D. 18500
E. 27500

###ANSWERS###

1. Ans. C.
Let total salary in 2013 be INR x
Total salary in 2016 be INR y
According to the given information:
The ratio on saving in the year 2013 and 2016 are in the ratio 3 : 5.

$$\Rightarrow \frac{15\%\ of\ x}{35\%\ of\ y} = \frac{3}{5}$$

$$\frac{x}{y} = \frac{3}{5} \times \frac{35}{15} = \frac{7}{5} \quad \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

$$\therefore \text{ Ratio of EMI expenses} = \frac{40\%\ of\ x}{15\%\ of\ y}$$

$$\Rightarrow \text{ Ratio of EMI expenses} = \frac{0.4x}{0.15y}$$

Now taking the values of x/y from (1)

$$\Rightarrow \text{Ratio of EMI expenses} = \frac{7}{5} \times \frac{40}{15} = 56:15$$

Hence, the required ratio is 56: 15

2. Ans. B.
Total expense in 2014 = INR 1, 85,000
⇒Saving in 2014 = 50% of 1, 85,000
⇒Saving in 2014 = INR 92,500
According to the given information:
The saving in 2012 is $\frac{4}{5}$th of the saving in 2014
∴Saving in 2012 = 4/5 × 92,500 = INR 74,000
Let the total expense in 2012 be INR x
∴35% of x = 74,000

$$\Rightarrow x = \frac{74,000 \times 100}{35}$$

Now, expenditure on food in 2012 is 21% of x

$$\Rightarrow \text{Expenditure on food in 2012} = \frac{74,000 \times 100}{35} \times \frac{21}{100}$$

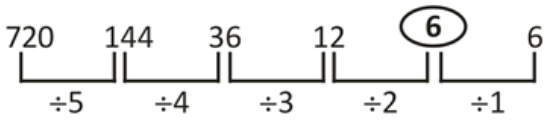
⇒Expenditure on food in 2012 = INR 44,400

3. Ans. D.
Let the monthly salary in 2013 be INR 100
According to the given information:
Every year there is an increase of 100% in monthly salary as compared to previous year's monthly salary
Then salary in 2014 = INR 200
⇒Salary in 2015 = INR 400
⇒Salary in 2016 = INR 800
Now, expenses on travelling in 2013 = 32% of salary
⇒Expenses on travelling in 2013 = INR 32
∴Required ratio = 800/32 = 25: 1

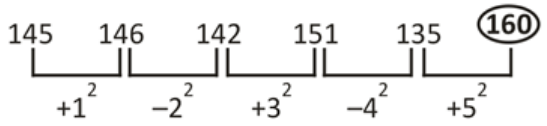
4. Ans. E.
Total expenses in year 2011 = INR 3, 00,000
There is an increase of 18%
∴Total expense in 2012 = 3, 00,000 + 18% of 3,00,000
⇒Total expense in 2012 = INR 3, 54,000
Now, Expense on travelling in 2012 = 18% of 3, 54,000
⇒Expense on travelling in 2012 = INR 63,720
EMI expense in 2012 = 26% of 3, 54,000
⇒EMI expense in 2012 = INR 92,040
Combine expense = 63,720 + 92,040 = INR 1, 55,760

5. Ans. C.
Money spend by Sunil on food = 21% + 13% + 20% + 10% + 40%
Average money spend by Sunil on food = 104%/ 5 = 20.8% of 5, 00,000
⇒Average money spend by Sunil on food = INR 1, 04,000
Now, Money saved by Sunil = 35% + 15% + 50% + 17% + 35%
Average money saved by Sunil = 152%/ 5 = 30.4% of 5, 00,000
⇒Average money saved by Sunil = INR 1, 52,000
∴Required ratio = $\frac{1,04,000}{1,52,000} \times 100 = 68.42\%$ ≈68%

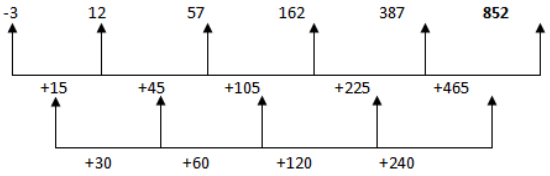
6. Ans. E.
The pattern of the series is:



7. Ans. A.
The pattern of the series is:



8. Ans. B.



-3 , 12 , 57 , 162 , 387 , **852**
Hence, option B is correct.
9. Ans. D.
The pattern of the series is:
7 × 1 + 1 = 8
8 × 2 + 2 = 18
18 × 3 + 3 = 57
57 × 4 + 4 = 232
232 × 5 + 5 = **1165**
10. Ans. E.
The pattern of the series is:
18 + 23 = 41
41 + 19 = 60
60 + 17 = 77
77 + 13 = 90
90 + 11 = **101**
11. Ans. C.
Percentage of Apples produced in country C = 3.85%
Percentage of Grapes produced in country C = 5.63%
Combined percentage of Apples and Grapes = 3.85 + 5.63 = 9.48%
Thus, the weight of apples and grapes produced comprises 9.48% of the total fruit production.
∴ Weight of Apples and Grapes = $\frac{9.48}{100} \times 50000$
∴ Weight of Apples and Grapes = 4740 kilos
Hence the correct option is option (C).
12. Ans. B.
Percentage of Mangoes produced in country C = 25.7%
Thus, the weight of mangoes produced comprises 25.7% of the total fruit production.
∴ Weight of Mangoes produced = $\frac{25.7}{100} \times 50000$
∴ Weight of Mangoes produced = 12850 kilos
The Mangoes cost Rs. 480 per kilo.
∴ Money earned = 12850 kilos × 480
∴ Money earned = Rs. 6168000
Hence the correct option is option (B).
13. Ans. A.
Percentage of Bananas produced in country C = 50.5%
Thus, the weight of Bananas produced comprises 50.5% of the total fruit production.
∴ Weight of Bananas produced = $\frac{50.5}{100} \times 50000$
∴ Weight of Bananas produced = 25250 kilos
The Bananas cost Rs. 36 per kilo.
∴Selling price of bananas = 25250 kilos × 36
∴Selling price of bananas = Rs. 909000
Percentage of Grapes produced in country C = 5.63%
Thus, the weight of Grapes produced comprises 5.63% of the total fruit production.
∴ Weight of Grapes produced = $\frac{5.63}{100} \times 50000$
∴ Weight of Grapes produced = 2815 kilos
The Grapes cost Rs. 100 per kilo.
∴Selling price of grapes = 2815 kilos × 100
∴Selling price of grapes = Rs. 281500
∴Required Percentage = $\frac{909000 - 281500}{281500} \times 100$
∴Required Percentage = 6275*100/2815= 222.91 = 223(approximatley)
∴
Hence the correct option is option (A).
14. Ans. D.
Percentage of Apples produced in country C = 3.85%
Thus, the weight of Apples produced comprises 3.85% of the total fruit production.
∴ Weight of Apples produced = $\frac{3.85}{100} \times 50000$
∴ Weight of Apples produced = 1925 kilos
Percentage of Mangoes produced in country C = 25.7%
Thus, the weight of mangoes produced comprises 25.7% of the total fruit production.

∴ Weight of Mangoes produced = $\frac{25.7}{100} \times 50000$

∴ Weight of Mangoes produced = 12850 kilos

∴required average = $\frac{1925+12850}{2}$

∴required average = 7387.5 kilos

Hence the correct option is option (D).

15. Ans. E.

Percentage of Grapes produced in country C = 5.63%

Thus, the weight of Grapes produced comprises 5.63% of the total fruit production.

∴ Weight of Grapes produced = $\frac{5.63}{100} \times 50000$

∴ Weight of Grapes produced = 2815 kilos

Percentage of other Fruits produced in country C = 14.5%

Thus, the weight ofother Fruits produced comprises 14.5% of the total fruit production.

∴ Weight of other Fruits produced = $\frac{14.5}{100} \times 50000$

∴ Weight of other Fruits produced = 7250 kilos

∴Required Ratio = $\frac{2815}{7250} = \frac{563}{1450}$

∴Required Ratio = 563 : 1450

Hence the correct option is option (E).

16. Ans. A.

I. $x^2 = 7x$

x=7, 0;

II. $(y + 7)^2 = 0$

y = -7;

So x > y

17. Ans. A.

I. $8x^2 + 26x = -15$

$\Rightarrow 8x^2 + 26x + 15 = 0$

$8x^2 + 20x + 6x + 15 = 0$

(4x+3) (2x+5)

⇒ x = -3/4, -5/2

II. $12y^2 - 20y + 8 = 0$

$12y^2 - 12y - 8y + 8 = 0$

⇒(12y-8) (y-1)

⇒ y = 2/3, 1

So x < y

18. Ans. C.

$x^3 - 4913 = 0$

$x^3 = 4913$

$x = \sqrt[3]{4913}$

$x = 17$

$y^2 - 289 = 0$

$y^2 = 289$

$y = \pm 17$

19. Ans. A.

$X^2 - 25X + 156 = 0$

$X^2 - 12X - 13X + 156 = 0$

X(X – 12) -13(X – 12) = 0

(X – 12)(X – 13) = 0

X = 12, 13

$Y^2 + 25Y + 156 = 0$

$X^2 + 12Y + 13Y + 156 = 0$

Y(Y + 12) + 13(Y + 12) = 0

(Y + 12)(Y + 13) = 0

Y = -12, -13

X > y

20. Ans. C.

From I,

$x^2 + 11x + 30 = 0$

$x^2 + 6x + 5x + 30 = 0$

$x(x + 6) + 5 (x + 6) = 0$

$(x + 5) (x + 6) = 0$

$x = -5, -6$

From II,

$y^2 + 7y + 12 = 0$

$y^2 + 4y + 3(y + 4) = 0$

$y = -3, -4$

∴ $x < y$

21. Ans. E.

Let the two numbers be x and y

2x+3y=36----------(1)

3x+2y=39----------(2)

Equn 1*3 and 2*2

6x+9y=108

6x+4y = 78

Subtracting both the equations

5y=30

Y= 6

Putting the value in equation 1

3x+12 =39

3x=27

X=9

22. Ans. B.

Let each worker does 1 unit per day.
Since 3/5th work is completed in 50 days ⇒ total units of work = 48*50*[5/3] = 4000 units.
Remaining work = 4000*[2/5] = 1600 units. 1600 units can be completed in remaining 40 days by 1600/40 = 40 men.
Men to lay off = 48-40 = 8 men.
23. Ans. A.
Let six consecutive even integers be X-5, X-3, X-1, X + 1, X + 3, X + 5
Average = 6X/6 = X = 37 ⇒ Numbers are 32, 34, 36, 38, 40 and 42.
Next five odd integers are 43, 45, 47, 49, and 51. Average = 47
24. Ans. A.
Solution:-Let number of girls be x. Each contributed = 8x
Total contribution = $8x^2$= 6272 ⇒ x^2 = 784 ⇒ x = 28
25. Ans. C.
Ans. C
LCM (15, 10) = 30 units of tank.
Pipe A fills 2 units per minute; Pope B fills 3 units per minute.
Per minute = 2+3 = 5 units
Can be filled in = 30/5 = 6 minutes
But filled in 8 minutes
Total input water = 8*5 = 40 units. Hence 40-30 = 10 units extra water wasted by leak in 8 minutes.
Leak can empty the tank in = [8/10]*30 = 24 minutes
26. Ans. E.
I. Clearly the number 'N' can either be 73 or 37
II. Case 1: When N=73,
130-N=57 So, Quantity I > Quantity II
Case 2: When N=37,
130-N=93 So, Quantity I < Quantity II
Thus, relationship between Quantity I & Quantity II can't be established.
27. Ans. B.
Ratio of length & height='' 3:2 = 3y : 2y
So area of wall= 3y × 2y= 96
$6y^2$ = 96
Y= √16= 4
Length= 4×3= 12 m
Height= 4×2= 8 m

$$\frac{1}{2}\% \ of \ 8 = \frac{5}{8} \times 8 = 5$$

Quantity I: $62\frac{1}{2}$
Quantity II: 50% of 12= 6
So Quantity II > Quantity I
28. Ans. B.
Quantity I:

$$\text{MP} = \frac{1300 \times 100 \times 100}{80 \times 65} = 2500 \ Rs$$

Quantity II: Let the cost price be x.
Then, loss = (x - 2040)
Again, profit = (2355 - x)
Now, (2355 - x) = (x - 2040)/2 or,
4710 - 2x = x - 2040 or,
3x = 4710+2040
=> x = 6750/3 = 2250 Rs.
Selling price = (2250x120)/100 = Rs. 2700
So option B, Quantity II > Quantity I
29. Ans. B.
Quantity I:

$$P + \frac{P \times 4 \times 4}{100} = 2900$$

P= 2500
Now for amount 4000 Rs,
time taken 4000= 2500+ 2500×4×T/100
T= 15 years
For Quantity II: 20 men in 8 days so 16 men in 20 × 8/16 = 10 days and
25 women in 12 days so 10 women in 25 × 12/10 = 30 days
So in 3 days, they complete (1/10 + 1/30) × 3 = 2/5
So remaining work = 1 – 2/5 = 3/5
20 men 1 work in 8 days and x men 3/5 work in 6 days
So 20 × 8 × 3/5 = x × 6 × 1
So, x = 16 men
So option B, Quantity II > Quantity I
30. Ans. A.
Quantity I: Speed of train A in (Km/hr)=

$$\frac{132+183}{9} \times \frac{18}{5} = 126$$

km/hr
Quantity II: Speed of train B in (km/hr)= $\frac{300}{3.5} = 85.71 \ km/hr$
So Quantity I > Quantity II
31. Ans. B.
Ram's age + Shyam's age = 35 × 2 = 70 year
Rohan's age + Shyam's age = 32 × 2 = 64
Ram's age + Rohan's age = 38 × 2 = 76
On adding all,
2(Ram's + Rohan's + Shyam's) age = 70 +64

(Ram + Rohan + Shyam)'s age = $\frac{210}{2}$ = 105

Average of all three = $\frac{105}{3}$ = 35

Average of Piyush and Ankit = $\frac{35}{2}$ = 17.5

Required answer = $\frac{35\times3+17.5\times2}{5}$ = 28

32. Ans. A.

Let P, Q, R, S be the members of the family and order of ages be P<Q<R<S

(P+Q+R+S)/4 = 25

P+Q+R+S = 100

(Q+R+S)/3 = 30

Q+R+S = 90

Therefore P= 100-90 = 10

Also (P+Q+R)/3 = 20

P+Q+R= 60

Therefore S= 100-60 = 40

Now 10+Q+R+40 = 100

Q+R = 50

Also, given

R=2Q – 10

Solving for R and Q we get R= 30 & Q= 20;

Product if ages = 10*20*30*40 = 240000.

33. Ans. B.

Let the total profit earned by Rachita, Rohit and Shubham be Rs. P

Then Rachita's salary = 30% of P = $\frac{30}{100}\times P=\frac{3P}{10}$

The remaining profit = $P-\frac{3P}{10}=\frac{7P}{10}$

This remaining profit is to be shared among the 3 of them in the ratio of their investements.

$Rachita's\ share : Rohit's\ share : Shubham's\ share = 25000 : 30000 : 15000$

$\therefore Rachita's\ share : Rohit's\ share : Shubham's\ share = 25 : 30 : 15$

Rachita's share = Profit share + Salary

∴Rachita's share = $\frac{25}{70}\times\frac{7P}{10}+\frac{3P}{10}$

∴Rachita's share = $\frac{385P}{700}=\frac{11P}{20}$

∴Rohit's share = $\frac{30}{70}\times\frac{7P}{10}$

∴Rohit's share = $\frac{3P}{10}$

∴Shubham's share = $\frac{15}{70}\times\frac{7P}{10}$

∴Shubham's share = $\frac{3P}{20}$

Rachita gets Rs. 1200 more than Rohit and Shubham together.

$\therefore \frac{11P}{20}-\left(\frac{3P}{10}+\frac{3P}{20}\right)=1200$

$\therefore \frac{11P}{20}-\left(\frac{9P}{20}\right)=1200$

$\therefore \frac{2P}{20}=1200$

∴ P = Rs. 12000.

Therefore, Shubham's share = $\frac{3}{20}\times12000=1800$ Rs.

Hence the correct option is option (B).

34. Ans. C.

Let his monthly income is Rs.x

His expenses = 50% of x + (50 + 25 + 10)% of 50% of x

$=\frac{x}{2}+\frac{85}{100}\times\frac{x}{2}=\frac{185x}{200}$

Remaining = Rs.900

Total monthly income = expenses + 900

Or, x = $\frac{185x}{200}$ + 900

⇒900 = $\frac{15x}{200}$

⇒x = Rs.12000

Annual income = 12 × 12000 = 144000

35. Ans. A.

Speed of the bus = 80kmph

Distance travelled = 64km

Time required to travel 64km = 64/80 hr = 8/10 ×60 min= 48 mins.

Time taken to travel 64km = 60mins

Therefore stoppage time = 60 – 48 = 12 mins

36. Ans. A.

Company	Plastic Bats	Wooden Bats	Brand B	Brand A
R	275000	275000	55000	220000
S	385000	165000	27500	137500
T	220000	330000	110000	220000
U	220000	330000	55000	275000
V	275000	275000	137500	137500

Reqd. Ratio = 55000/550000 = 1:10

37. Ans. B.

Company	Plastic Bats	Wooden Bats	Brand B	Brand A
R	275000	275000	55000	220000
S	385000	165000	27500	137500
T	220000	330000	110000	220000
U	220000	330000	55000	275000
V	275000	275000	137500	137500

P = 27500+ 137500 = 165000

Q = 275000- 55000 = 220000

So, Q-P = 220000-165000=55000

38. Ans. C.

Total wooden bats of brand A are manufactured by all the companies = 220000+137500+220000+275000+137500 = 990000

39. Ans. D.

Company	Plastic Bats	Wooden Bats	Brand B	Brand A
R	275000	275000	55000	220000
S	385000	165000	27500	137500
T	220000	330000	110000	220000
U	220000	330000	55000	275000
V	275000	275000	137500	137500

Reqd. number = 220000

40. Ans. E.

Company	Plastic Bats	Wooden Bats	Brand B	Brand A
R	275000	275000	55000	220000
S	385000	165000	27500	137500
T	220000	330000	110000	220000
U	220000	330000	55000	275000
V	275000	275000	137500	137500

X = $\frac{220000+275000}{2} = 247500$

Y = 220000

So, X-Y = $247500 - 220000 =$ 27500

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