

Instructions

For the following questions answer them individually

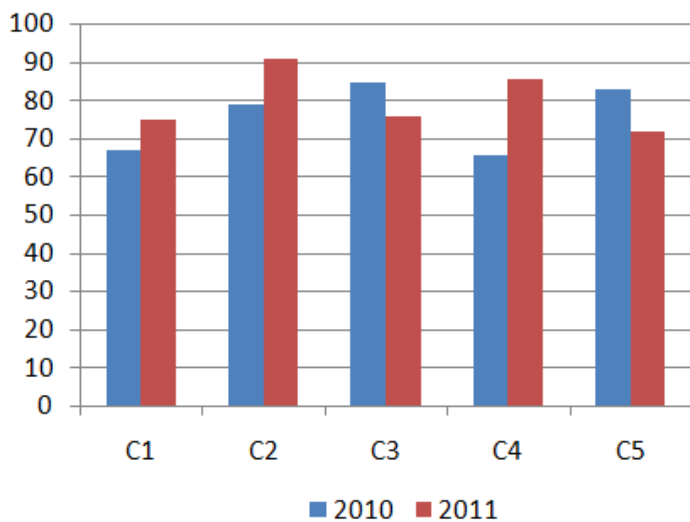
Question 86

Directions:

Study the following bar graph and answer the question that follows:

Sales of books (in thousands) from 5 (C1,C2,C3,C4 and C5) branches of a publishing company for the two successive years 2010 and 2011.

What is the total sales in the branches C1, C3 and C5 together for both the years?(in thousands)



A 458

B 448

C 468

D 438

Answer: A

Explanation:

Total sales of branch C1, C3 and C5 for both years (in thousands)

$$= (68 + 75) + (85 + 76) + (82 + 72) = 458$$

=> Ans - (A)

Question 87

A Gift box contains 10 bangles, of which average weight of first 4 bangles is 49 grams and the average weight of remaining 6 bangles is 50 grams. Find the average weight of the total bangles. (in grams)

A 49.6

B 49.7

C 49.4

D 49.5

Answer: A

Explanation:

Average weight of first 4 bangles = 49 grams

$$\Rightarrow \text{Weight of first 4 bangles} = 49 \times 4 = 196 \text{ grams}$$

Similarly, weight of remaining 6 bangles = $50 \times 6 = 300$ grams

$$\therefore \text{Average weight of the total bangles} = \frac{196+300}{10} = 49.6 \text{ grams}$$

=> Ans - (A)

Question 88

Total area of the square Glass Piece is 1156 cm², which is placed on the top of a table. The width between the edge of the table and the glass piece is 9 cm wide. Find the length of the table. (in cm)

A 52

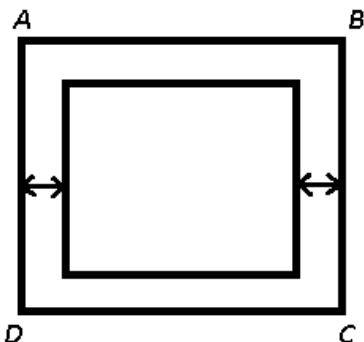
B 53

C 50

D 51

Answer: A

Explanation:



ABCD is the table and the glass piece is placed inside.

$$\text{Side of glass} = \sqrt{1156} = 34 \text{ cm}$$

Width between glass and table = 9 cm

=> Side of table = $9 + 34 + 9 = 52$ cm

=> Ans - (A)

Question 89

If the radius of a circle is fifteen times, its perimeter will become how many times of its previous perimeter?

A 15

B 17

C 16

D 14

Answer: A

Explanation:

Radius of circle is directly proportional to perimeter, $P = 2\pi r$

So, if radius is increased 15 times, hence the perimeter will become **15 times** of its previous perimeter.

=> Ans - (A)

Question 90

The Loss incurred by selling an article at Rs.545 is 60% of the gain attained by selling the same article at Rs.785. Find the cost price of the article. (in Rs)

A 615

B 645

C 635

D 625

Answer: C

Explanation:

Let cost price of the article = Rs. x

Loss = Rs. $(x - 545)$

Profit = Rs. $(785 - x)$

According to ques, => $x - 545 = \frac{60}{100}(785 - x)$

=> $5x - 2725 = 2355 - 3x$

=> $5x + 3x = 2725 + 2355 = 5080$

=> $x = \frac{5080}{8} = 635$

∴ Cost price = Rs. **635**

=> Ans - (C)

Question 91

Vimal obtained 46 marks out of 80 in French, 84 marks out of 100 in English, 44 out of 70 in Spanish and 36 out of 50 in Japanese. What is the overall percentage obtained by him? (in %)

- A 50
- B 70
- C 60
- D 80

Answer: B

Explanation:

Marks obtained = $46 + 84 + 44 + 36 = 210$

Maximum marks = $80 + 100 + 70 + 50 = 300$

\therefore Overall percentage obtained by him = $\frac{210}{300} \times 100 = 70\%$

\Rightarrow Ans - (B)

Question 92

When a number divided by 119 it leaves a remainder 15. What will be the remainder, when the same number divided by 17.

- A 13
- B 14
- C 12
- D 15

Answer: D

Explanation:

When a number is divided by 119 it leaves a remainder 15, let the number be = $119 + 15 = 134$

Now, when 134 is divided by 17, $\Rightarrow 134 = 17 \times 7 + 15$

Thus, remainder = **15**

\Rightarrow Ans - (D)

Question 93

A sum of Rs.6800 invested under simple interest at rate of 8% p.a. If the amount after 5 years is been withdrawn and half of the total amount is been invested in Share market. Find the remaining amount. (in Rs)

- A 4,460
- B 4,560
- C 4,760
- D 4,660

Answer: C

Explanation:

Principal sum = Rs. 6800

Rate of interest = 8% and time period = 5 years

Simple interest = $\frac{P \times R \times T}{100}$

$$= \frac{6800 \times 8 \times 5}{100} = \text{Rs. } 2720$$

Thus, total amount after 5 years = $\text{Rs. } (6800 + 2720) = \text{Rs. } 9,520$

\therefore Remaining amount after half of the total amount is been invested in Share market = $\frac{9520}{2} = \text{Rs. } 4,760$

=> Ans - (C)

Question 94

Find the value of x.

$$\frac{2}{5}(x) + \frac{3}{10}(x) - \frac{3}{5}(x) = 459$$

A 4490

B 4790

C 4690

D 4590

Answer: D

Explanation:

$$\text{Expression: } \frac{2}{5}(x) + \frac{3}{10}(x) - \frac{3}{5}(x) = 459$$

$$\Rightarrow x \times \left(\frac{4+3-6}{10} \right) = 459$$

$$\Rightarrow x = 459 \times \frac{10}{1} = 4590$$

=> Ans - (D)

Question 95

A person cycles from hostel to college at a speed of 15 kmph and reaches 2.5 minutes late. If he cycles at a speed of 20 kmph and he reaches early by 2.5 minutes. Find the distance between hostel and college. (in KM)

A 5

B 4

C 3

D 2

Answer: A

Explanation:

Let ideal time taken = t hours

Also, speed is inversely proportional to time.

$$\Rightarrow \frac{15}{20} = \frac{t - \frac{2.5}{60}}{t + \frac{2.5}{60}}$$

$$\Rightarrow 15t + \frac{2.5}{4} = 20t - \frac{2.5}{3}$$

$$\Rightarrow 20t - 15t = \frac{2.5}{4} + \frac{2.5}{3}$$

$$\Rightarrow t = \frac{7.5+10}{60} = \frac{17.5}{60}$$

\therefore Distance = speed \times time

$$= 15 \times \left(\frac{17.5}{60} + \frac{2.5}{60} \right)$$

$$= \frac{20}{4} = 5 \text{ km}$$

=> Ans - (A)

Question 96

A bulb producing company found that 13% of the overall product is defective. If the number of non defective products is 4611, then find the number of defective products.

- A 686
- B 683
- C 689
- D 698

Answer: C

Explanation:

% of non defective bulbs = $100 - 13 = 87\% \equiv 4611$

=> Number of defective products = $13\% \equiv \frac{4611}{87} \times 13$

= $53 \times 13 = 689$

=> Ans - (C)

Question 97

Simplify:

$13.24 + 24.35 + 35.46 - 46.57 = 2 \times ?$

- A 13.24
- B 11.24
- C 14.24
- D 12.24

Answer: A

Explanation:

Expression : $13.24 + 24.35 + 35.46 - 46.57 = 2 \times ?$

=> $2x = 73.05 - 46.57$

=> $x = \frac{26.48}{2} = 13.24$

=> Ans - (A)

Question 98

Find the number of trailing Zeros in 243!

- A 57
- B 56
- C 58
- D 55

Answer: C

Explanation:

Number of trailing zeroes = $\frac{243}{5} + \frac{243}{25} + \frac{243}{125}$

$$= 48 + 9 + 1 = 58 \quad [\text{Number will be round off to the lowest value}]$$

=> Ans - (C)

Question 99

Find the product of two numbers, whose LCM is 9167 and HCF is 1.

A 9697

B 9267

C 9167

D 9567

Answer: C

Explanation:

Product of the 2 numbers = Product of L.C.M. and H.C.F.

$$= 9167 \times 1 = 9167$$

=> Ans - (C)

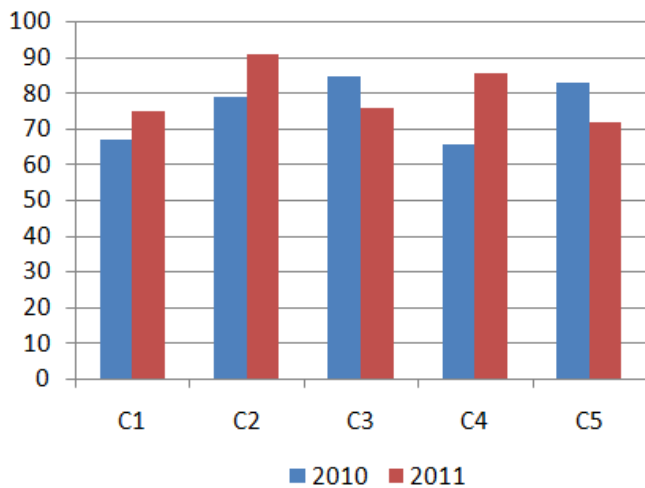
Question 100

Directions:

Study the following bar graph and answer the question that follows:

Sales of books (in thousands) from 5 (C1,C2,C3,C4 and C5) branches of a publishing company for the two successive years 2010 and 2011.

What is the average sales of all the branches (in thousands) for the year 2010?



A 74

B 75

C 73

D 76

Answer: D

Explanation:

Total sales of all the branches (in thousands) for the year 2010

$$= 68 + 79 + 85 + 66 + 82 = 380$$

$$\Rightarrow \text{Average sales of all the branches (in thousands) for the year 2010} = \frac{380}{5} = 76$$

\Rightarrow Ans - (D)

Question 101

Martin donates 13% of his Salary to Visually challenged organization, 12% of his Salary to Orphanage, 14% of his Salary to Physically challenged organization and 16% of his Salary to the foundations for medical help. The remaining amount of Rs.40950 of Salary has been deposited in the bank for monthly expenses. Find the amount donated to Orphanage.

A Rs.10,920

B Rs.12,920

C Rs.11,920

D Rs.13,920

Answer: A

Explanation:

If total salary is 100%, then % salary remaining after the donations = $100 - (13 + 12 + 14 + 16) = 45\%$

According to ques, $45\% \equiv \text{Rs. } 40,950$

$$\text{Thus, amount donated to orphanage} = 12\% \equiv \frac{40950}{45} \times 12$$

$$= 910 \times 12 = \text{Rs. } 10,920$$

\Rightarrow Ans - (A)

Question 102

A shopkeeper sells a product at the rate of Rs.2736 and earns a profit of 12.5%. Find the amount which is equal to half of the cost price of the product. (in Rs.)

A 1,214

B 1,212

C 1,216

D 1,218

Answer: C

Explanation:

Selling price = Rs. 2736 and profit % = 12.5%

$$\Rightarrow \text{Cost price} = \frac{2736}{(100+12.5)} \times 100$$

$$= 24.32 \times 100 = \text{Rs. } 2432$$

$$\therefore \text{Amount which is equal to half of the cost price of the product} = \frac{2432}{2} = \text{Rs. } 1216$$

\Rightarrow Ans - (C)

Question 103

Amir shared 775 gifts among 4 kids. The share of the first kid, twice the share of second kid, thrice the share of third kid and four times the share of fourth kid are all equal. Find the sum of gifts received by 1st kid and 2nd kid.

A 558

B 552

C 556

D 554

Answer: A

Explanation:

Let share of each kid be a, b, c, d respectively.

Then according to ques, $\Rightarrow a = 2b = 3c = 4d = k$

$$\Rightarrow a = k, b = \frac{k}{2}, c = \frac{k}{3}, d = \frac{k}{4}$$

Thus, total = $a + b + c + d = 500$

$$\Rightarrow k + \frac{k}{2} + \frac{k}{3} + \frac{k}{4} = 775$$

$$\Rightarrow k \times \left(\frac{12+6+4+3}{12} \right) = 775$$

$$\Rightarrow k = 775 \times \frac{12}{25} = 372$$

$$\therefore \text{Sum of gifts received by 1st kid and 2nd kid} = a + b = k + \frac{k}{2} = 3\frac{k}{2}$$

$$= 3 \times \frac{372}{2} = 558$$

\Rightarrow Ans - (A)

Question 104

A train takes 52 seconds to cross a bridge of length 204 m. if the same train takes 18 seconds to cross a sign board, find the length of the train. (in metre)

A 107

B 109

C 106

D 108

Answer: D

Explanation:

Let length of train = l m and speed = s m/s

$$\text{Speed of train which takes 52 seconds to cross a bridge of length 204 m} = s = \frac{204+l}{52} \text{ -----(i)}$$

$$\text{Also, } s = \frac{l}{18} \text{ -----(ii)}$$

Substituting value of s from equation (ii) in (i), we get :

$$\Rightarrow \frac{l}{18} = \frac{204+l}{52}$$

$$\Rightarrow 52l = (204 \times 18) + 18l$$

$$\Rightarrow 52l - 18l = 34l = 204 \times 18$$

$$\Rightarrow l = \frac{204 \times 18}{34} = 108$$

\therefore Length of train = **108 m**

\Rightarrow Ans - (D)

Question 105

Directions:

Study the following bar graph and answer the question that follows:

Sales of books (in thousands) from 5 (C1,C2,C3,C4 and C5) branches of a publishing company for the two successive years 2010 and 2011.

What is the ratio of the total sales of branch C2 for both years to the total sales of branch C4 for both years?



A 152:170

B 169:153

C 153:169

D 170:152

Answer: D

Explanation:

Total sales of branch C2 for both years (in thousands) = $79 + 91 = 170$

Total sales of branch C4 for both years (in thousands) = $66 + 86 = 152$

=> Required ratio = **170:152**

=> Ans - (D)

Question 106

A Person travel Equilateral triangular area with the speed of 12kmph, 24kmph and 8kmph along the planes of the triangular field. Find the average speed of the entire journey. (in Kmph)

A 11

B 14

C 12

D 13

Answer: C

Explanation:

Since, the distance travelled is equal on the three sides, hence average speed will be the harmonic mean of the speeds.

$$= \frac{1}{12} + \frac{3}{24} + \frac{1}{8}$$

$$= \frac{2+3+3}{24}$$

$$= \frac{3}{6} \times 24 = 12 \text{ km/hr}$$

=> Ans - (C)

Question 107

The difference between the interest earned on the same amount invested under compound interest and simple interest at same rate of interest for 2 years is Rs. 60. If the rate of interest is 4% p.a. find the amount invested. (in Rs.)

A 37,500

B 35,500

C 36,500

D 34,500

Answer: A

Explanation:

Rate of interest = 4% and time period = 2 years

Let principal sum = Rs. P

Also, difference between compound interest and simple interest for 2 years = $P\left(\frac{r}{100}\right)^2$

$$\Rightarrow P\left(\frac{4}{100}\right)^2 = 60$$

$$\Rightarrow P = 60 \times \frac{10000}{16}$$

$$\Rightarrow P = 60 \times 625 \text{Rs. } 37,500$$

=> Ans - (A)

Question 108

Simplify:

$$196^2 \times 56 \div 14^5 \times 1021 = ?$$

A 4064

B 4084

C 4074

D 4054

Answer: B

Explanation:

Expression : $196^2 \times 56 \div 14^5 \times 1021 = ?$

$$= \left(\frac{14^4}{14^5}\right) \times 56 \times 1021$$

$$= \frac{1}{14} \times 56 \times 1021$$

$$= 4 \times 1021 = 4084$$

=> Ans - (B)

Question 109

A Box contains three different types of old coins in the ratio 3:5:7, the values of old coins are 1 rupee, 5 rupees and 10 rupees respectively. If the total value of the coins in the box is Rs.294, find the number of coins values 10 rupees.

- A 22
- B 24
- C 23
- D 21

Answer: D

Explanation:

Let number of 1 rupee, 5 rupees and 10 rupees respectively be $3x$, $5x$ and $7x$

$$\text{Total amount} = (1 \times 3x) + (5 \times 5x) + (10 \times 7x) = 2352$$

$$\Rightarrow 3x + 25x + 70x = 294$$

$$\Rightarrow x = \frac{294}{98} = 3$$

$$\therefore \text{Number of 10 rupees coins} = 7 \times 3 = 21$$

\Rightarrow Ans - (D)

Question 110

What is the height of the cuboid, if the cube of diagonal $22\sqrt{3}$ cm is melted and casted, the cuboid's length is the same as the cube's side and the breadth of the cuboid is 11 cm? (in cm)

- A 46
- B 44
- C 45
- D 47

Answer: B

Explanation:

Let side of cube be a cm

$$\Rightarrow \text{Diagonal} = \sqrt{a^2 + a^2 + a^2} = 22\sqrt{3}$$

$$\Rightarrow \sqrt{3}a = 22\sqrt{3}$$

$$\Rightarrow a = 22 \text{ cm}$$

Let height of cuboid = h cm, length, $l = 22$ cm and breadth, $b = 11$ cm

According to ques, Volume of cuboid = Volume of cube

$$\Rightarrow lbh = a^3$$

$$\Rightarrow 22 \times 11 \times h = (22)^3$$

$$\Rightarrow h = \frac{22 \times 22}{11} = 44 \text{ cm}$$

\Rightarrow Ans - (B)

Question 111

Station master decides that the length and the breadth of the rectangular Digital Board should be increased by 8% and decreased by 2% respectively. Find the overall change in the area.

- A 5.84% Decrease
- B 6.56% Increase
- C 6.56% Decrease
- D 5.84% Increase

Answer: D

Explanation:

Let the length and breadth of rectangle be 100 cm

$$\Rightarrow \text{Original area} = 100 \times 100 = 10000 \text{ cm}^2$$

$$\text{Increasing the length by 8\%, } \Rightarrow \text{new length} = 100 \times \frac{108}{100} = 108 \text{ cm}$$

Similarly, new breadth = 98 cm

$$\Rightarrow \text{New area} = 108 \times 98 = 10584 \text{ cm}^2$$

$$\therefore \text{Area is increased by} = \frac{10584 - 10000}{10000} \times 100 = 5.84\%$$

\Rightarrow Ans - (D)

Question 112

The amount triples itself under Compound interest in 4 years. In how many years will it become 27 times of it?

- A 12
- B 11
- C 13
- D 14

Answer: A

Explanation:

The amount gets tripled in 4 years.

In case of compound interest, the amount will become 3^n times in $4n$ years

$$\Rightarrow \text{Final amount} = 27 = (3)^3$$

Thus, after $4 \times 3 = 12$ years, amount will become 27 times.

\Rightarrow Ans - (A)

Question 113

In support project of an English based company, there are 621 male and 621 female employees. The average productivity of all the employees is 72 calls per day. The average calls attended per male employees is 72 calls per day. What is the average of calls attended per day by a female employee.

- A 72
- B 74
- C 71
- D 73

Answer: A

Explanation:

Since, there are an equal number of male and female employees in the company, and also the average productivity is 75 calls per day which is equal to the number of calls attended by the males.

Thus, number of calls attended per day by a female employee will also equal to = **72**

=> Ans - (A)

Question 114

In a mixture of 56 litres, the ratio of milk and water is 3:4. If this ratio is to be 3:5, then the quantity of water to be further added is (in Litres)

A 9

B 6

C 8

D 7

Answer: C

Explanation:

Quantity of milk in 56 litres mixture = $\frac{3}{3+4} \times 56 = 24$ litres

=> Quantity of water = $56 - 24 = 32$ litres

Let x litres of water is to be added.

$$\Rightarrow \frac{24}{32+x} = \frac{3}{5}$$

$$\Rightarrow 120 = 96 + 3x$$

$$\Rightarrow 3x = 120 - 96 = 24$$

$$\Rightarrow x = \frac{24}{3} = 8$$

∴ Quantity of water to be further added is **8 litres**.

=> Ans - (C)

Question 115

Sheela walks a certain distance at $(\frac{16}{17})$ th of the usual speed and takes 5 minutes more than the usual time. Find the usual time taken. (in minutes)

A 70

B 75

C 80

D 85

Answer: C

Explanation:

Let usual speed = 17 m/min and usual time taken = t min

=> New speed = 16 m/min and new time = $(t + 5)$ min

Also, speed is inversely proportional to time.

$$\Rightarrow \frac{17}{16} = \frac{t+5}{t}$$

$$\Rightarrow 17t = 16t + 80$$

$$\Rightarrow 17t - 16t = t = 80$$

∴ Usual time taken = **80 minutes**

⇒ Ans - (C)

Question 116

The salary ratio of Hamid, Celement and Ganesh is 3:5:7, if Ganesh is getting Rs.860 more than Hamid. What is the salary of Celement? (in Rs.)

A 1,075

B 1,045

C 1,055

D 1,065

Answer: A

Explanation:

Let salary of Hamid, Celement and Ganesh be $3x$, $5x$ and $7x$ respectively.

According to ques, $\Rightarrow 7x - 3x = 860$

$$\Rightarrow x = \frac{860}{4} = 215$$

∴ Celement's salary = $5 \times 215 = \text{Rs. } 1075$

⇒ Ans - (A)

Question 117

Find the value of x.

$$\sqrt{169} \div 13 + \sqrt{196} = 3 \times x$$

A 5

B 4

C 2

D 3

Answer: A

Explanation:

$$\text{Expression: } \sqrt{169} \div 13 + \sqrt{196} = 3 \times x$$

$$= \frac{13}{13} + 14 = 3x$$

$$\Rightarrow x = \frac{15}{3} = 5$$

⇒ Ans - (A)

Question 118

The shopkeeper added 42% of the cost price as mark up and then he gives a discount of same 42% on the marked price for a sale, then what will be the overall profit or loss percentage?

- A 17.64% Loss
- B 16.64% Profit
- C 16.64% Loss
- D 17.64% Profit

Answer: A

Explanation:

Let cost price = Rs. 100

$$\Rightarrow \text{Marked price} = 100 \times \left(\frac{142}{100}\right) = \text{Rs. } 142$$

$$\text{Thus, selling price after discount of 42\%} = 142 \times \frac{100-42}{100} = \text{Rs. } 82.36$$

$$\therefore \text{Loss \%} = \frac{100-82.36}{100} \times 100 = 17.64\%$$

\Rightarrow Ans - (A)

Question 119

The average weight of 63 Notebooks in a box is 6.3 kg. When a new Notebook is added to the box the average goes to 6.4 kg. Find the weight of the new Notebook. (in Kg)

- A 12.5
- B 12.7
- C 12.1
- D 12.3

Answer: B

Explanation:

Average weight of 63 Notebooks in a box = 6.3 kg

$$\Rightarrow \text{Total weight} = 63 \times 6.3 = 396.9 \text{ kg}$$

Let weight of new book = x kg

$$\Rightarrow \text{New average} = \frac{396.9+x}{64} = 6.4$$

$$\Rightarrow 396.9 + x = 64 \times 6.4 = 409.6$$

$$\Rightarrow x = 409.6 - 396.9 = 12.7 \text{ kg}$$

\Rightarrow Ans - (B)

Question 120

How many ways that 675 mobiles can be distributed equally to the students in the class?

- A 12
- B 14
- C 13
- D 11

Answer: A

