

RRB Section Controller 2025

Section Controller · CEN 04/2025 · Question Paper Compilation

English

All 4 Shifts (Sets) · Official Answer Key

About this Compilation

This booklet compiles all **4 shift papers** of the **RRB Section Controller 2025 CBT 1** examination (CEN 04/2025) in **English**, with the correct option marked as per the official answer key.

✓ Correct option (highlighted green)

How to use

- Use the **Index** page to jump directly to any set (clickable).
- Questions appear in shift order, numbered 1 onward within each set.
- Diagram and wide-table questions appear at full width at the end of their set.
- The correct answer is highlighted in green with a tick.

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Index — All Sets (click to open)

Set 1

11 Feb 2026
9:00 AM - 11:00 AM

Set 3

12 Feb 2026
9:00 AM - 11:00 AM

Set 2

11 Feb 2026
1:00 PM - 3:00 PM

Set 4

12 Feb 2026
1:00 PM - 3:00 PM

Q1

Which title best encapsulates the passage?

- A. Deadly Predators of the Insect World
- B. Arachnophobia: A Human Weakness
- C. Spiders: Fearsome Yet Fascinating Creatures ✓
- D. Webs of Death and Silk of Steel

Q2

The ratio of Ruby and Anita's salary is 4 : 3. Ruby and Anita receive a festival allowance of ₹1,000 and ₹2,000, respectively, in a certain month, which makes the ratio of their salary as 5 : 4. Find the difference in the salaries (in ₹) of Ruby and Anita.

- A. 6,500
- B. 7,000
- C. 6,000 ✓
- D. 5,200

Q3

Find an estimate of the variance of the following data (rounded off to two decimal places).

Class: 0-10 10-20 20-30 30-40 40-50
Frequency: 8 16 24 25 17

- A. 185.05
- B. 190.34
- C. 147.67 ✓
- D. 163.11

Q4

Two circles with centres O and O', with radii 6 cm and 8 cm, respectively, intersect at two points A and B. If OA is a tangent to the circle with centre O' and vice versa, what is the length of the common chord AB?

- A. 11.44 cm
- B. 9.60 cm ✓
- C. 13.55 cm
- D. 14.23 cm

Q5

Which spider is known to have caused no fatalities since the anti-venom's development in 1981?

- A. Sydney funnel-web spider ✓
- B. Orb-weaver spider
- C. Tarantula
- D. Widow spider

Q6

The 7-digit number 98A038B is divisible by 3. What is the maximum value of (A + B)?

- A. 12
- B. 16
- C. 17 ✓
- D. 18

Q7

What does the passage suggest about the perception versus reality of spiders?

- A. They are responsible for widespread disease.
- B. They survive best in Arctic conditions.
- C. Though generally feared, almost 98 percent of spider species are harmless to humans. ✓
- D. They are far more dangerous than people realise.

Q8

Given the ratio of the perimeters of two squares is 7:11, find the ratio of their areas.

- A. 121:7
- B. 121:49
- C. 7:121
- D. 49:121 ✓

Q9

According to the passage, spider silk replication is significant because _____.

- A. it can eliminate natural predators
- B. it enables scientists to produce a material with exceptional tensile strength. ✓
- C. it allows mass spider farming
- D. it may replace metal in construction



Q10

In a certain code language, 'DRAW' is coded as '6924' and 'WINS' is coded as '1356'. What is the code for 'W' in the given code language?

A. 1

B. 6



C. 3

D. 4

Q11

The mode and median of a data are 13.8 and 64, respectively. What is the mean of the data? (Use empirical formula.)

A. 92.1

B. 89.1



C. 80.4

D. 93.3

Q12

Identify the synonym of the word 'replicated' as used in the passage.

A. Modified

B. Copied



C. Destroyed

D. Tested

Q13

Eight persons A, B, C, D, E, F, G and H are sitting around a square table, facing the centre of the table. Some of them are sitting at the corners, while some are sitting at the exact centres of the sides. B is sitting second to the left of E. E is sitting at the centre of one of the sides. Only three people are sitting between G and B when counted from the left of B. D is sitting to the immediate right of G. Only one person is sitting between F and D when counted from the left of F. F is not an immediate neighbour of E. A is sitting third to the right of B. C is sitting to the immediate left of E. How many people are sitting between H and B when counted from the left of B?

A. One



B. Four

C. Three

D. Two

Q14

The sum of two positive numbers is 32 and their product is 112. The positive difference between them is:

A. 18

B. 20

C. 22

D. 24



Q15

In the following series, only one letter-cluster is incorrect. Select the INCORRECT letter-cluster.

TDN DNX NXH XHR HRB ROL

A. ROL



B. HRB

C. DNX

D. TDN

Q16

Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

A. TU-XY



B. MN-PQ

C. RS-UV

D. DE-GH

Q17

In the following series, only one letter-cluster is incorrect. Select the INCORRECT letter-cluster.

ODL IJE CPD WVZ QBV

A. IJE



B. QBN

C. ODL

D. WVR



Q18

This question is based on the five, three-digit numbers given below.

(Left) 321 354 387 627 681 (Right)

(Example: 697 – First digit = 6, second digit = 9 and third digit = 7)

NOTE: All operations are to be done from left to right.

What will be the resultant if the second digit of the second highest number is added to the third digit of the lowest number?

A. 4

B. 2

C. 7

D. 3



Q19

Each of the digits in the number 3187569 is arranged in ascending order from left to right. What will be the sum of the digits which are first from the left and first from the right in the new number thus formed?

A. 12

B. 10



C. 8

D. 11

Q20

In what ratio must a grocer mix two varieties of wheat worth ₹94 per kg and ₹116 per kg, so that if he sells the mixture at ₹144 per kg, he may gain 44%?

A. 9:4

B. 7:3

C. 8:3



D. 5:2

Q21

Three identical cubes, each with edge 8 cm, are placed adjacent to each other to form a cuboid. What is the percentage decrease in the total surface area compared to the sum of surface areas of the three separate cubes? (Rounded off to two decimal places.)

A. 27.53%

B. 22.22%



C. 20.24%

D. 25.67%

Q22

Suman has a brother, Tushar. Tushar's daughter is Urmi. Urmi is married to Vikram; Vikram has a son, Yash. How is Urmi related to Suman?

A. Sister's daughter

B. Daughter

C. Brother's daughter



D. Wife

Q23

If 2 is added to each odd digit and 1 is subtracted from each even digit in the number 1326342, then what will be the difference between the highest and the lowest digits in the number thus formed?

A. 7

B. 4



C. 6

D. 5

Q24

If a man travels at the rate of 12 kmph, he misses a train by 7 minutes. However, if he travels at the rate of 30 kmph, he reaches the station 5 minutes before the arrival of the train. Find the distance covered by him to reach the station.

A. 8 km

B. 12 km

C. 4 km



D. 14 km

Q25

An arithmetic progression has 42 as its first term, 60 as its last term, and a total of 14 terms. What is the sum of these 14 terms?

A. 711

B. 714



C. 717

D. 716



Q26

Eight people are sitting in two parallel rows containing 4 people each in such a way that there is equal distance between adjacent persons.
In row 1 – C, D, E and F are seated and all of them are facing south.
In row 2 – J, K, L and M are seated and all of them are facing north.
Thus each person faces another person from the other row. C sits third to the right of E. The one facing M is an immediate neighbour of E. The one facing D is an immediate neighbour of M. The one facing C is an immediate neighbour of L. J sits at some place to the left of K.

Who amongst the following faces L?

A. C

B. D

C. E

D. F

Q27

What should come in place of the question mark (?) in the given series?

91 92 96 97 101 ?

A. 101

B. 102

C. 103

D. 104

Q28

Two taps can fill a cistern in 3 hours and 48 hours, respectively. A third tap can empty the filled cistern in 48 hours. How long (in hours) will it take to fill two-third of the empty cistern if all of them are opened together?

A. 4

B. 8

C. 6

D. 2

Q29

If 2 is added to each odd digit and 1 is subtracted from each even digit in the number 7145632, then how many digits will appear more than once in the new number thus formed?

A. 0

B. 2

C. 3

D. 1

Q30

Which of the following is the most suitable title for the passage?

A. The Complete History of Ancient Greece

B. A Biography of Graham Allison

C. The Economics of Modern China

D. The Thucydides's Trap: The Inevitability of Hegemonic War?

Q31

What is the central theme of this passage?

A. The passage is based upon the historical dynamic where the rise of a new power creates a high risk of conflict with an established power, and the factors that influence this outcome.

B. It is a detailed military analysis of the Peloponnesian War.

C. It claims that economic factors are the only cause of war.

D. It argues that war between a rising and ruling power is completely inevitable and unavoidable.

Q32

Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of ::?

: FKG :: PUQ : %

A. # = LIO, % = MNK

B. # = LIM, % = JZK

C. # = HJM, % = JLP

D. # = LQM, % = JOK

Q33

Which of the following is a fact explicitly stated in the passage?

A. According to the passage, war occurred in all 16 historical cases studied.

B. The passage states that the actions and choices of leaders are irrelevant to the outcome.

C. The 'Thucydides's Trap' is a concept invented by a biologist.

D. The concept is named after the historian who chronicled the Peloponnesian War.



Q34

The ratio of the heights of a right circular cone and a right circular cylinder is 2 : 9 and the ratio of the radii of their bases is 7 : 2. If the volume of the cylinder is 972 cm^3 , then the volume (in cm^3) of the cone is:

A. 891

B. 889

C. 882



D. 885

Q35

Based on the passage, which inference can logically be drawn?

A. The passage implies that diplomacy is useless in preventing hegemonic conflict.

B. It can be inferred that Thucydides himself coined the term 'Thucydides's Trap'.

C. One can infer that the concept is used today to analyze the strategic relationship between the United States and China.



D. The author of the passage believes that war between a rising and ruling power is 100% certain.

Q36

Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster DOES NOT belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

A. FKMQ

B. BGIN



C. WBDH

D. QVXB

Q37

To complete a project, 12 men work for 10 days, working 9 hours per day. How many hours per day should 16 men work to finish the project in 5 days?

A. 12.5

B. 10.5

C. 11.5

D. 13.5



Q38

Which of the following best describes the tone of the passage?

A. Panicked and alarmist.

B. Analytical and cautionary.



C. Joyful and optimistic.

D. Dismissive and sarcastic.

Q39

Identify the central theme of the passage.

A. The role of innovation in sustaining business growth and relevance



B. The growing disconnection between companies and their consumers

C. The decline of traditional business models in the digital era

D. The dangers of relying excessively on technology

Q40

Which of the following facts is explicitly stated in the passage?

A. Companies should abandon technology to maintain authenticity

B. Nintendo failed to reach new audiences through its Wii console

C. McDonald's added salads and fruit to meet consumer demand for healthier meals



D. Businesses must prioritize expansion over customer satisfaction

Q41

The average of 8 numbers is 59. If each number is increased by 4, what will the new average be?

A. 59

B. 8

C. 63



D. 67



Q42

Which of the following best reflects the connection to real-life business situations?

- A. Technological innovation alone guarantees profitability
- B. Rigid adherence to traditional practices ensures stability
- C. Businesses that anticipate and respond to social trends maintain long-term success ✓
- D. Ignoring customer preferences strengthens brand loyalty

Q43

The 7-digit number 71A510B is divisible by 3. What is the maximum value of (A + B)?

- A. 11
- B. 13
- C. 16 ✓
- D. 12

Q44

Identify the tone of the passage.

- A. Analytical and optimistic ✓
- B. Satirical and mocking
- C. Pessimistic and cautionary
- D. Indifferent and detached

Q45

Find the mode (in ₹) for the following set of data of income of 40 people (rounded off to nearest integer).

Income (in ₹): 1000-1200 1200-1400 1400-1600 1600-1800 1800-2000

Number of people: 5 8 15 7 5

- A. 1493 ✓
- B. 1522
- C. 1535
- D. 1456

Q46

Identify the antonym of the word 'adapt'.

- A. Resist ✓
- B. Create
- C. Expand
- D. Observe

Q47

A retailer buys an electronic item for ₹230. His overhead expenses are ₹10. He sells the electronic item for ₹480 and makes x% profit. The value of x is:

- A. 100 ✓
- B. 80
- C. 90
- D. 120

Q48

The current population of a town is 16,000. It increases by 40% and 25% in two successive years but decreases by 62% in the third year. What is the population of the town at the end of the third year?

- A. 10,642
- B. 10,638
- C. 10,639
- D. 10,640 ✓

Q49

At a health club, 55% of the members are women and 45% of the members are men. If the average age of the men is 50 years and the average age of the women is 40 years, what is the average age (in years) of all the members?

- A. 44.5 ✓
- B. 44.9
- C. 43.6
- D. 43.8

Q50

Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster DOES NOT belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

- A. WUR ✓
- B. ZXT
- C. NLH
- D. FDZ



Q51

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding to/subtracting from/multiplying with 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(288,8,6)
(210,7,5)

A. (216,9,5)

B. (252,7,6)

C. (316,7,8)

D. (204,9,4)

Q52

Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of ::?

: ZQV :: PGK : %

A. # = WTU, % = LKH

B. # = XUT, % = MJO

C. # = XTR, % = LJG

D. # = XOS, % = RIN

Q53

In a circular race of 2715 m, Abhay and Bharti start from the same point and at the same time with speeds of 20 km/h and 34 km/h, respectively. After how long will they meet again for the first time on the track when they are running in the opposite directions?

A. 178 seconds

B. 186 seconds

C. 187 seconds

D. 181 seconds

Q54

By how much is 30% of 65 greater than 35% of 50?

A. 1

B. 2

C. 4

D. 3

Q55

The marks scored by 10 students are given below.

16, 13, 20, 18, 16, 14, 18, 11, 10, 16

The mode of the data is:

A. 20

B. 18

C. 13

D. 16

Q56

The circumference of the base of a cylindrical vessel is 220 cm and its height is 60 cm. How many litres of water can it hold?

A. 216

B. 231

C. 233

D. 202

Q57

Kavita, Rakesh, and Shalini invested in a business in the ratio 5:8:15. They invested their capitals for 8 months, 7 months and 4 months, respectively. What was the ratio of their profits?

A. 13:14:15

B. 11:14:15

C. 10:14:15

D. 12:14:15

Q58

Refer to the following number-symbol series and answer the question that follows. Counting is to be done from left to right only. (Note: All numbers are single-digit numbers only)

(Left) 7 3 / 3 ^ \$ 2 < * \$ \ 8 ? + 3 @ 8 ^ @ \ < (Right)

How many such symbols are there each of which is immediately preceded by another symbol and also immediately followed by a number?

A. 1

B. 3

C. 2

D. 4



Q59

A can complete a piece of work in 57 days. B is 80% less efficient than A. C is 50% more efficient than B. B and C work together for 54 days. A alone will complete the remaining work in:

A. 27 days

B. 30 days ☒

C. 26 days

D. 35 days

Q60

The sum of the present ages of Hitesh and Jitesh is 96 years. After 2 years from now, Hitesh's age will be three times that of Jitesh. Hitesh's present age (in years) is:

A. 76

B. 67

C. 75

D. 73 ☒**Q61**

Six people, H, I, J, N, O and P, live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, numbered 2 and so on, till the topmost floor, which is numbered 6. Only two people live between N and P. No one lives above I. Only two people live between I and O. Only four people live between I and H. N lives above O. How many people live below J?

A. Four

B. One

C. Two

D. Three ☒**Q62**

This question is based on the five, three-digit numbers given below.

(Left) 756 723 789 347 359 (Right)

(Example: 697 – First digit = 6, second digit = 9 and third digit = 7)

NOTE: All operations are to be done from left to right.

What will be the resultant if the second digit of the second highest number is added to the third digit of the second lowest number?

A. 9

B. 12

C. 11

D. 14 ☒**Q63**

Two triangles have the same base of 24 cm. The ratio of their heights is 5 : 7 and the sum of their areas is 1728 cm². What is the height of the larger triangle?

A. 90 cm

B. 72 cm

C. 78 cm

D. 84 cm ☒**Q64**

An arithmetic progression has 42 as its first term and 55 as its last term, with a total of 10 terms. What is the sum of these 10 terms?

A. 484

B. 485 ☒

C. 487

D. 488

Q65

If the sides of a triangle are 12 cm, 35 cm and 37 cm, then the circum radius is:

A. 17.0 cm

B. 18.5 cm ☒

C. 16.0 cm

D. 16.5 cm

Q66

Pure ghee costs ₹120 per kg. After adulterating it with vegetable oil costing ₹60 per kg, a shopkeeper sells the mixture at the rate of ₹98 per kg, thereby making a profit of 40%. In what ratio does he mix the two?

A. 2 : 7

B. 3 : 7

C. 1 : 5 ☒

D. 2 : 5



Q67

Six people, H, I, J, N, O and P, live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2 and so on, till the topmost floor, which is numbered 6.

N lives on floor numbered 2. H lives on a floor below N.

Only four people live between O and H. P lives on an even-numbered floor. J lives on an odd-numbered floor but not on floor number 5. How many people live between I and N?

A. One

B. Two



C. Three

D. Four

Q68

A and B have incomes in the ratio 4:3 and expenditures in the ratio 2:1. If A saves ₹5,000 and B saves ₹6,000, then A's expenditure exceeds B's by how much?

A. ₹4,500



B. ₹5,000

C. ₹3,500

D. ₹3,000

Q69

A dealer buys two articles X and Y for ₹500 each. He marks each of them at the same price. He sells X by giving two successive discounts of 31% and 25% and still earns ₹328 as profit. If he sells Y at a single discount of 61%, then what is the profit percentage on Y?

A. 24%

B. 24.8%



C. 23.8%

D. 23%

Q70

If 'P' stands for '÷', 'Q' stands for '×', 'R' stands for '+' and 'S' stands for '-', then what will be come in place of question mark (?) in the following equation?

$$44 \text{ Q } 8 \text{ S } 91 \text{ P } 13 \text{ R } 67 = ?$$

A. 415

B. 412



C. 451

D. 421

Q71

The median of the following data is 350.

Class Interval	Frequency
0 - 100	4
100 - 200	6
200 - 300	x
300 - 400	10
400 - 500	y
500 - 600	8

What are the values of x and y if the total frequency is 40?

A. $x = 8, y = 4$

B. $x = 6, y = 6$

C. $x = 5, y = 7$



D. $x = 3, y = 9$

Q72

A brick measures 5 m in length, 4 m in breadth and 3 cm in height. How many bricks will be used to make a wall of length 15 m, breadth 20 m and height 4 m?

A. 2,000



B. 20,000

C. 20

D. 200

Q73

Each of G, H, I, J, N, O and P has a flight on a different day of a week, starting from Monday and ending on Sunday of the same week. Only one person has a flight after J. Only three people have flights between P and O. Only one person has a flight between H and N. Only two people have flights between J and P. I has a flight immediately before H. How many people have flights between G and H?

A. Two



B. One

C. Three

D. Four

Q74

Dev and Tej started a business by investing amounts of ₹2,450 and ₹1,960, respectively. If Dev's share in the profit earned by them is ₹270, what is the total profit (in ₹) earned by them together?

A. 342

B. 443

C. 486



D. 526



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Q75

AB is parallel to CD. A transversal PQ intersects AB and CD at E and F, respectively, and $\angle PEB = 49^\circ$. G is a point between AB and CD such that $\angle BEG = 29^\circ$ and $\angle GFE = 24^\circ$. What is the measure of $\angle EGF$?

A. 62°

B. 66°

C. 54°



D. 60°

Q76

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some pen are lead.

Some lead are ruler.

Conclusions:

(I): Some pen are ruler.

(II): All ruler are lead.

A. Only conclusion (I) follows.

B. Only conclusion (II) follows.

C. Neither conclusion (I) nor (II) follows.



D. Both conclusions (I) and (II) follow.

Q77

A shopkeeper marks an article at ₹x and offers a discount of 70% on it. He sells it for ₹384 after charging a VAT of 60% on the discounted price. What is the value of x?

A. 900

B. 800



C. 600

D. 1,000

Q78

A conical tent was erected by Army at a base camp to accommodate people. The height of the tent is 42 m and the area of the base camp is 200 m^2 . If each person requires 70 m^3 of air to breathe, how many persons can be accommodated in that tent?

(Use $\pi = 22/7$)

A. 50

B. 60

C. 40



D. 45

Q79

The amount of extension in an elastic string varies directly with the weight hung on it. If a weight of 127 gm produces an extension of 2.3 cm, then what weight would produce an extension of 16.1 cm?

A. 889 gm



B. 1048 gm

C. 917 gm

D. 762 gm

Q80

The H.C.F. and the L.C.M. of two numbers are 13 and 585, respectively. If one of the numbers is 117, then find the other number.

A. 65



B. 78

C. 13

D. 52

Q81

The average height of 15 boys out of a class of 60 boys is 164 cm. If the average height of the remaining boys is 169 cm, then the average height of the whole class (in cm) is:

A. 167.5

B. 168.75

C. 167.75



D. 166.5

Q82

Select the pair which follows the same pattern as that followed by the two pairs given below. Both pairs follow the same pattern.

HLH-DHD

LPL-HLH

A. GKG-BGB

B. GJE-BFB

C. GKG-CGC



D. GJE-CGC



Q83

If a man bought 8 erasers for ₹4, and sold them at 5 erasers for ₹8, then the gain percentage is:

- A. 240%
- B. 210%
- C. 230%
- D. 220%



Q84

Box A contains 5 red and 4 white marbles and box B contains 3 red and 6 white marbles. If a marble is drawn from each box, what is the probability that they are both of the same colour?

- A. $\frac{19}{27}$
- B. $\frac{17}{27}$
- C. $\frac{13}{27}$
- D. $\frac{11}{27}$



Q85

The circumference of the base of a solid right circular cylinder is 88 cm and its height is 153 cm. What is the volume (in cm^3) of the cylinder?

Take $\pi = \frac{22}{7}$

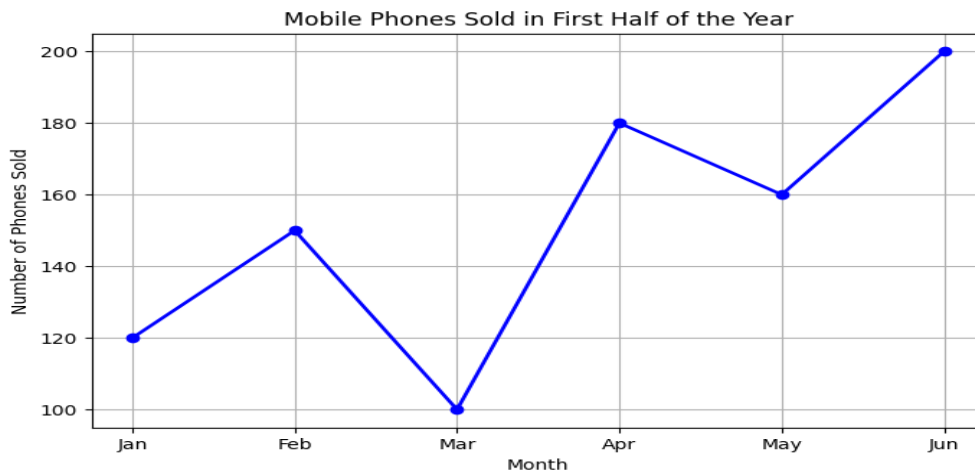
- A. 93,794
- B. 94,248
- C. 95,071
- D. 94,453



Q86

Study the line graph and answer the question that follows.

The given line graph shows the number of mobile phones sold by a store during the first six months of a year.



(Note: Number of phones sold in February were 150.)

Find the average monthly sales of phones. (Round off your answer to the nearest integer.)

A. 150

B. 174

C. 152



D. 162

Q87

The following table shows the price (in ₹ per 100 kg) of different items during different years. Answer the given question based on this table. What is the average price (in ₹ per 10 kg) of pulses from the years 1990 to 2010?

	1990	1995	2000	2005	2010
Rice	800	1150	1680	2400	3500
Wheat	450	700	1200	1650	2100
Pulses	2000	2700	3650	4600	6400
Sugar	1500	2200	3000	3800	4500
Groundnut	1200	1700	2450	3500	4200
Oil	4200	5500	6400	800	11000

A. 404

B. 387



C. 394

D. 414



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Q88

The simplified value of $\frac{16}{45} \times (98 + 20) + 97$ is

A. $\frac{6253}{45}$



B. $\frac{6262}{45}$

C. $\frac{6256}{45}$

D. $\frac{6257}{45}$

Q89

The given table shows the distribution of weekly wages (₹) of workers. Find the mode.

Wages (₹)	100–150	150–200	200–250	250–300	300–350
Frequency	6	12	15	24	15

A. 270

B. 260

C. 275



D. 265



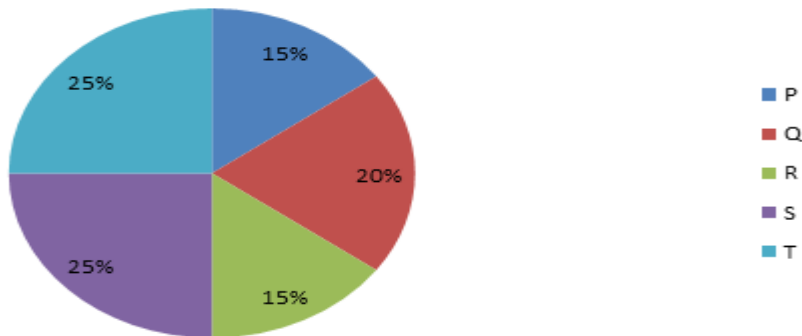
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Q90

The following pie chart shows the enrolment of students into tenth class in 5 different schools: P, Q, R, S and T. The total number of students enrolled is 2,000. Study the chart and answer the question that follows.

Enrolment of students into 5 schools P, Q, R, S and T



Find the total number of students enrolled in schools P, R and S.

A. 1,200

B. 1,000

C. 1,100



D. 1,400

Q91

The simplified value of $83 - [84 - (96 \div 4 - (16 - 36 \div 9) \div 2)]$ is:

A. 14

B. 17



C. 22

D. 18

Q92

The following data pertaining to the number of insects per plant. Find median number of insects per plant.

Number of insects per plant (x)	1	2	3	4	5	6	7	8	9	10	11	12
No. of plants (f)	1	3	5	6	10	13	9	5	3	2	2	1

A. 9

B. 8

C. 6



D. 5



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Q93

The simplified value of $\frac{(98^6 \times 18^{14} \times 2^{15})}{(98^5 \times 18^{13} \times 2^{13})}$ is

A. 7056



B. 7051

C. 7055

D. 7058

Q94

Two fair cubical dice, with the faces numbered from 1 to 6 in each of the dice, are rolled. What is the probability that the sum of the numbers on the two faces that appear on top is 8, given that each of the two faces that appear on top shows an odd number?

A. $\frac{5}{36}$ B. $\frac{2}{9}$ C. $\frac{1}{18}$ D. $\frac{2}{5}$

Q95

Simplify: $\sqrt{289} + \sqrt{0.0289} - \sqrt{4.84}$

A. 1.11

B. 8.19

C. 14.97



D. 8.76

Q96

The HCF of two numbers is 12, and their product is 31,104. How many such pairs of numbers are possible?

A. 1

B. 5

C. 2



D. 4



Q97

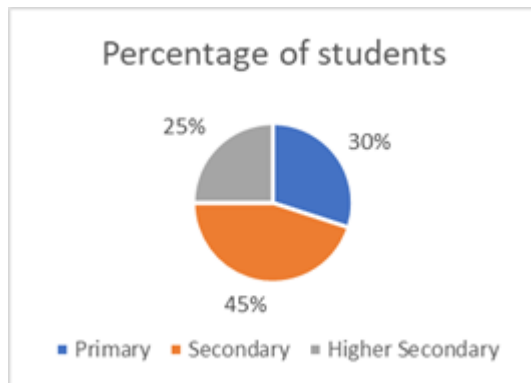
Three cubes of sides 1 cm, 6 cm and 8 cm are melted to form a new cube. Find $(\frac{2}{3})^{\text{rd}}$ of the surface area of the new cube.

- A. 486 cm²
- B. 648 cm²
- C. 162 cm²
- D. 324 cm²



Q98

The pie-chart shows percentage of students availing scholarship in a school. If the total strength of the school is 3850 and the ratio of students in primary section to secondary section to higher secondary section is 5 : 4 : 2, find the number of secondary students who availed the scholarship.



- A. 742
- B. 788
- C. 670
- D. 630



Q99

A solid metallic sphere of radius 12 cm is melted and recast into smaller spherical balls of 2 cm radius each. What will be the total surface area of all the spherical balls so obtained?

- A. 3456π sq. cm
- B. 864π sq. cm
- C. 216π sq. cm
- D. 2304π sq. cm



Q100

After successive discounts of 12% and 5% an article was sold for ₹418. What was the original price of the article?

- A. ₹516
- B. ₹536
- C. ₹500
- D. ₹496



Q1

In the following series, only one letter-cluster is incorrect. Select the INCORRECT letter-cluster.

ELS BIP YFM VCJ SZG PVD

A. YFM

B. SZG

C. PVD



D. VCJ

Q2

Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster DOES NOT belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

A. CZTR

B. LICA

C. VSMK

D. RPJG



Q3

q is the mean proportional of p and r . q^2 is the mean proportional of p^2r and r^3 . Find the value of q if $p = 169$, where p, q, r are natural numbers.

A. 45

B. 52

C. 13



D. 26

Q4

What will come in place of the question mark (?) in the following equation if '+' and '-' are interchanged and 'x' and '÷' are interchanged?

$$16 \div 2 - 48 \times 6 + 15 = ?$$

A. 17

B. 25



C. 28

D. 20

Q5

By how much is 30% of 65 greater than 35% of 40?

A. 7.5

B. 5.5



C. 0.5

D. 2.5

Q6

The sum of two positive numbers is 59 and their product is 564. The positive difference between them is:

A. 55

B. 47

C. 35



D. 34

Q7

A man adds water to milk to gain profit. He mixes water with milk worth ₹70/litre to get a final mixture costing ₹55/litre. What is the ratio of milk to water in the mixture?

A. 8 : 3

B. 9 : 4

C. 12 : 5

D. 11 : 3



Q8

If a man bought 8 board pins for ₹4, and sold them at 5 board pins for ₹9, then the gain percentage is:

A. 270%

B. 260%



C. 280%

D. 250%

Q9

If x is added to the numbers 2, 8, 1, 5, the resulting numbers, in order, are in proportion. Find the mean proportion of the terms $2x + 1$ and $5x - 2$.

A. 7

B. 3



C. 5

D. 1



Q10

The mean and mode of a data set are 52 and 55, respectively. Find the median of the data set.

- A. 50
- B. 51
- C. 48
- D. 53



Q11

The position(s) of how many letters will remain unchanged if each letter in the word JOURNAL is arranged in the English alphabetical order?

- A. 2
- B. 1
- C. 0
- D. 3



Q12

According to the passage, which feature of the Ajanta caves is directly responsible for conveying the evolution of Buddhist thought?

- A. The execution of frescoes using natural pigments that endured over time
- B. The chaitya halls and sculptural programs narrating the Jataka tales
- C. The depiction of divine and human emotions through mural techniques
- D. The chronological span of cave excavation from the 2nd century BCE onward



Q13

What specific aspect of the Kailasa Temple is presented as evidence of its architectural and symbolic ambition?

- A. Its location within a complex containing monuments of multiple faiths
- B. Its dedication to Lord Shiva as a sacred embodiment of Mount Kailasa
- C. Its intricate carvings and soaring pillars reflecting artistic devotion
- D. Its excavation from a single basalt rock forming a multi-tiered structure



Q14

The author's description of Ajanta and Ellora as "living galleries" most plausibly implies that these sites:

- A. Functioned as static repositories of religious artefacts
- B. Were primarily designed for public exhibition rather than worship
- C. Remain dynamic conveyors of cultural and spiritual meaning
- D. Continue to attract modern artistic reinterpretations



Q15

From the passage's treatment of Ellora's religious plurality, one may reasonably infer that the creators of the complex endorsed:

- A. Sequential religious dominance reflected through architectural change
- B. A neutral artistic agenda detached from theological significance
- C. Competitive religious expression within a shared geographic space
- D. An integrative cultural framework accommodating multiple belief systems



Q16

The frescoes of Ajanta are described as "vibrant". Which option best conveys the **antonym** of this term in the given context?

- A. Murals that evoke divine and human emotion through colour
- B. Walls whose imagery lacks visual vitality and expressive force
- C. Paintings rendered with pigments resilient to time
- D. Frescoes preserved as evidence of artistic mastery



Q17

Find the sum of all prime numbers greater than 2 but less than 30.

- A. 136
- B. 129
- C. 178
- D. 127



Q18

Which of the following most accurately states the main idea of the passage?

- A. The high rate of plastic waste generation (25,000 tonnes daily) and India's second-place ranking in riverine pollution.
- B. The catastrophic effect of riverine plastic emissions from the Ganges, Indus, and Brahmaputra on global oceans.
- C. The vast scale and specific challenges of municipal solid waste and plastic pollution in India. ✓
- D. Expert estimates show the massive projected increase in India's Municipal Solid Waste (MSW) production by 2030 and 2050.

Q19

Which is the best description of the tone of the passage?

- A. Optimistic and celebratory
- B. Serious and cautionary ✓
- C. Casual and conversational
- D. Humorous and entertaining

Q20

Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

- A. JK - JI ✓
- B. JN - HL
- C. QU - OS
- D. PT - NR

Q21

What is the synonym of the word 'dumped' from the passage?

- A. Protected
- B. Domesticated
- C. Decorated
- D. Discarded ✓

Q22

Which of the following represents the structure of the passage?

- A. Definition
- B. Problem-Solution ✓
- C. Compare-Contrast
- D. Chronological

Q23

Eight people are sitting in two parallel rows containing 4 people each in such a way that there is equal distance between adjacent persons.

In row 1 – S, T, U and V are seated and all of them are facing south.

In row 2 – C, D, E and F are seated and all of them are facing north.

Thus each person faces another person from the other row. T sits third to the right of S. The one facing F is an immediate neighbour of S. The one facing V is an immediate neighbour of F. The one facing T is an immediate neighbour of D. C sits at some place to the left of E.

Who amongst the following faces D?

- A. V ✓
- B. T
- C. U
- D. S

Q24

What is the ANTONYM of the word 'challenging'?

- A. Manageable ✓
- B. Frequent
- C. Tolerable
- D. Uninspiring

Q25

Saeed allows two successive discounts of 30% and 10% on the marked price of a pen, which is equal to a single discount of ₹592. Then how much profit (in %) will Saeed get on that pen, if the cost price is ₹900?

- A. 11%
- B. 12% ✓
- C. 13%
- D. 10%



Q26

The following frequency distribution represents the monthly electricity consumption of 60 consumers in a locality.

Monthly Consumption (in units)	Number of consumers
50 - 65	5
65 - 80	8
80 - 95	12
95 - 110	18
110 - 125	10
125 - 140	7

What is the median of the data (correct to 2 decimal places)?

- A. 73.27
- B. 81.19
- C. 85.13
- D. 99.17



Q27

Each of the digits in the number 2597836 is arranged in ascending order from left to right. What will be the sum of the digits that are second from the left and second from the right in the new number thus formed?

- A. 13
- B. 11
- C. 7
- D. 9



Q28

F is the sister of G. G is the brother of S. T is the father of V. V is the son of S. How is F related to T?

- A. Wife's sister
- B. Wife's mother
- C. Father's sister
- D. Sister



Q29

What will come in the place of the question mark (?) in the following equation, if '+' and '-' are interchanged and 'x' and '÷' are interchanged?

$$304 - 17 \div 11 + 253 \times 11 = ?$$

- A. 468
- B. 470
- C. 475
- D. 466



Q30

Each of G, H, I, J, N, O and P has a flight on a different day of a week, starting from Monday and ending on Sunday of the same week. N has a flight immediately before I. P has a flight on one of the days after G. Only three people have flights before O. H has a flight immediately after I. Only one person has a flight after J. How many people have flights between P and H?

- A. One
- B. Two
- C. Four
- D. Three



Q31

A large cuboid-shaped container has the following dimensions: length = 15 meters, width = 8 meters, and height = 6 meters. A cube-shaped object with an edge length of 4 meters is placed inside the container. How many such cubes can be placed inside the container without any part sticking out?

- A. 8
- B. 10
- C. 6
- D. 12



Q32

In a certain code language, 'came after me' is coded as 'bg sp zh' and 'who came first' is coded as 'km cy sp'. How is 'came' coded in the given language?

- A. zh
- B. bg
- C. sp
- D. cy



Q33

In a room with dimensions 20m × 15m × 12m has a rectangular window of dimension 1m × 2m through which fresh air flows into the room. What should be the airflow rate (in m/min) through the window per unit area so that one-fourth of the air in the room would change every hour?

A. 7.5



B. 4

C. 2.5

D. 9

Q34

The perimeter of an isosceles triangle is 36 cm and the altitude to its base is 12 cm. Find the area of the triangle (in cm²).

A. 90

B. 140

C. 120

D. 60



Q35

A worker earns ₹1,200 for working 8 hours. At the same rate, how much will he earn for working 12 hours?

A. ₹2,200

B. ₹1,400

C. ₹2,000

D. ₹1,800



Q36

A and B can do a work in 2 days. If A alone can do it in 4 days, then in how many days can B alone do 70-times of the same work?

A. 280



B. 260

C. 272

D. 281

Q37

In what ratio must a grocer mix two varieties of rice worth ₹66 per kg and ₹108 per kg, so that if he sells the mixture at ₹143 per kg, he may gain 43%?

A. 7:11

B. 3:16

C. 1:3

D. 4:17



Q38

A train P going at the speed of 33 km/h completely passes train Q of length 452 m, going in the same direction on parallel tracks, at 24 km/h, in 9.5 minutes. How much time (in seconds) will P take to completely cross train R of length 482 m, going at 21 km/h in the opposite direction?

A. 97



B. 112

C. 96

D. 83

Q39

Refer to the following number-symbol series and answer the question that follows. Counting is to be done from left to right only. (Note: All numbers are single-digit numbers only)

(Left) 2 8 # \$ 2 4 @ 5 7 5 9 @ 9 \ > & 7 9 @ > * ^ & (Right)

How many such numbers are there each of which is immediately preceded by a symbol and also immediately followed by a symbol?

A. Three

B. Zero

C. One



D. Two

Q40

In an A.P., the common difference is -7 and the first term is 31. Find the 10th term.

A. -33

B. -32



C. -30

D. -29

Q41

Select the letter-cluster that DOES NOT belong to the following series.

ARN XVK UZH SDF OHB LLY

A. SDF



B. OHB

C. XVK

D. LLY



Q42

The 11th term of the A.P. whose first and second terms are 32 and 9, is:

- A. -201
- B. -195
- C. -197
- D. -198

**Q43**

A and B started a business with investments in the ratio 5 : 6. After 6 months, A increased his investment by 60% and B decreased his investment by 25%. At the end of the year, the total profit was ₹28,153. Find A's share in the profit.

- A. ₹13,616
- B. ₹15,574
- C. ₹10,616
- D. ₹21,616

**Q44**

The average of 7 numbers is 57. If each number is increased by 7, what will the new average be?

- A. 8
- B. 57
- C. 64
- D. 71

**Q45**

Find the class interval corresponding to the class mark $x_i = 27$, where the lower limit of the first continuous class interval is 7.

x_i	f_i
11	3
19	7
27	11
35	5
43	3

- A. 21 – 33
- B. 22 – 32
- C. 23 – 31
- D. 24 – 30

**Q46**

The 7-digit number 34A690B is divisible by 3. What is the maximum value of (A + B)?

- A. 14
- B. 16
- C. 18
- D. 17

**Q47**

Three numbers are in the ratio 1:2:3. If their LCM is 198, find their HCF.

- A. 9
- B. 11
- C. 33
- D. 18

**Q48**

A dealer buys two articles X and Y for ₹8000 each. He marks each of them at the same price. He sells X by giving two successive discounts of 20% and 35% and still earns ₹616 as profit. If he sells Y at a single discount of 48%, then what is the profit percentage on Y?

- A. 6.7%
- B. 7%
- C. 6%
- D. 7.7%

**Q49**

Two trains, 280 meters and 290 meters in length, are running in opposite directions. The first train runs at the rate of 60 km/h and the second train at the rate of 48 km/h. How long will they take to cross each other?

- A. 25 seconds
- B. 12 seconds
- C. 19 seconds
- D. 17 seconds



Q50

Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster DOES NOT belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

- A. NPT
- B. PRV
- C. KMQ
- D. GIL

**Q51**

The ratio of the heights of a right circular cone and a right circular cylinder is 6 : 5 and the ratio of the radii of their bases is 4 : 3. If the volume of the cylinder is 630 cm^3 , then the volume (in cm^3) of the cone is:

- A. 441
- B. 444
- C. 448
- D. 449

**Q52**

AB is parallel to CD. A transversal PQ intersects AB and CD at E and F, respectively, and $\angle PEB = 65^\circ$. G is a point between AB and CD such that $\angle BEG = 22^\circ$ and $\angle GFE = 12^\circ$. What is the measure of $\angle EGF$?

- A. 73°
- B. 75°
- C. 88°
- D. 63°

**Q53**

The 7-digit number 23A908B is divisible by 3. What is the maximum value of (A + B)?

- A. 13
- B. 17
- C. 14
- D. 16

**Q54**

The average of the numbers 6.5, 10.6, 20.3 and a is 18. The value of a is:

- A. 34.6
- B. 36.6
- C. 33.6
- D. 35.6

**Q55**

What should come in place of the question mark (?) in the given series?

212 213 217 226 242 ?

- A. 266
- B. 264
- C. 267
- D. 265

**Q56**

A data set consists of six test scores: 18, 22, 24, 28, 30, and 35. Find the median of this data set.

- A. 32
- B. 24
- C. 28
- D. 26

**Q57**

A person saves 90% of his income. If his expenditure is ₹600, then his income (in ₹) is:

- A. 5400
- B. 6080
- C. 6040
- D. 6000



Q58

Refer to the following number series and answer the question that follows. Counting is to be done from left to right only. (All numbers are single-digit numbers only.)

(Left) 6 7 5 1 7 1 2 7 6 4 3 9 4 5 3 2 3 5 1 6 8 4 6 2 4 5 8
(Right)

How many such even numbers are there that are immediately preceded by an odd number and also immediately followed by an odd number?

- A. Five
- B. Four
- C. Two
- D. Three



Q59

Consider the data set: 4, 8, 6, 5, 3, 9. Find the standard deviation (correct up to two decimal places).

- A. 1.83
- B. 2.31
- C. 2.11
- D. 1.76



Q60

A mobile phone is marked at ₹88,500. After applying successive discounts of 8%, 5% and 2%, what will be its final selling price (in ₹), rounded to the nearest integer?

- A. 76,781
- B. 72,345
- C. 74,098
- D. 75,802



Q61

A, B, C, D, E, F, G and H are sitting around a square table. Some of them are sitting at the corners, while some are sitting at the exact centres of the sides. All of them are facing the centre. Only three people are sitting between B and F when counted from the left of B. D is sitting to the immediate right of F. Only three people are sitting between D and E when counted from the left of D. E is not sitting at any of the corners. Only two people are sitting between G and H when counted from the left of G. A is sitting to the immediate right of G. G is not an immediate neighbour of E. How many people are sitting between C and F, when counted from the right of C?

- A. Zero
- B. One
- C. Two
- D. Three



Q62

In what ratio must a grocer mix two varieties of wheat worth ₹68 per kg and ₹128 per kg, so that if he sells the mixture at ₹138 per kg, he may gain 38%?

- A. 7:8
- B. 1:1
- C. 15:17
- D. 17:13



Q63

A man buys 13 identical articles for a total of ₹15. If he sells each of them for ₹1.6, then what is his profit percentage? (Round off your answer to two decimal places.)

- A. 28.87%
- B. 27.87%
- C. 39.67%
- D. 38.67%



Q64

The sum of the present ages of Lokesh and Taresh is 28 years. After 2 years from now, Lokesh's age will be three times that of Taresh. Lokesh's present age (in years) is:

- A. 24
- B. 19
- C. 22
- D. 16



Q65

Read the given statement(s) and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statement(s).

Statements:

All vegetables are leeches.
All fruits are leeches.

Conclusions:

(I): Some vegetables are fruits.
(II): Some leeches are fruits.

- A. Neither conclusion (I) nor (II) follows
- B. Only conclusion (I) follows
- C. Both conclusions (I) and (II) follow
- D. Only conclusion (II) follows



Q66

A right circular cone and a right circular cylinder have equal base and equal height. If the radius of the base and the height are in the ratio 5 : 12, then the ratio of the total surface area of the cylinder to that of the cone is:

A. 0.5875

B. 16 : 5

C. 12 : 4

D. 17 : 9



Q67

Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of :: ?

: HKO :: FIM : %

A. # = POR, % = CNJ

B. # = KNJ, % = CJK

C. # = KNR, % = CFJ



D. # = KLJ, % = CKL

Q68

The H.C.F. and the L.C.M. of two numbers are 18 and 540, respectively. If one of the numbers is 90, then find the other number.

A. 108



B. 126

C. 72

D. 144

Q69

The prices of each article of types P, Q, and R are ₹280, ₹180, and ₹110, respectively. Shanu buys articles of each type in the ratio 3 : 2 : 5 for a total of ₹7000. How many articles of type Q did he purchase?

A. 10

B. 6

C. 4

D. 8



Q70

78 is related to 97 following a certain logic. Following the same logic, 117 is related to 136. To which of the given options is 148 related, following the same logic? (NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding to/subtracting from/multiplying with 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

A. 171

B. 167



C. 159

D. 183

Q71

The circumference of the base of a cylindrical vessel is 440 cm and its height is 25 cm. How many litres of water can it hold?

A. 399

B. 385



C. 349

D. 424

Q72

Select the pair which follows the same pattern as that followed by the two pairs given below. Both pairs follow the same pattern.

TVT-PRP
BDB-XZX

A. OPM-KMK

B. OQO-JMJ

C. OPM-JLJ

D. OQO-KMK



Q73

Select the triad that follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

DK-GM-IL
GN-JP-LO

A. JQ-MS-OR



B. IQ-MT-PR

C. IQ-MS-PR

D. JQ-MS-PR



Q74

According to the passage, what was the primary focus of Congress on the morning of September 11, 2001?

- A. It was meeting to review intelligence reports and defence strategies.
- B. It was reconvened to discuss domestic policy and budgetary concerns. ✓
- C. It was addressing emergency legislation related to military preparedness.
- D. It was engaged in debates on foreign policy and national security matters.

Q75

In which sequence of locations does the passage most clearly trace the morning's unfolding across the United States?

- A. New York → Virginia → Washington, D.C. → Florida → Maine ✓
- B. Washington, D.C. → Maine → New York → Florida
- C. Maine → New York → Florida → Virginia
- D. Florida → Virginia → Maine → New York

Q76

What can be inferred about the narrative perspective from the way the events are presented?

- A. It mirrors the dispassionate tone of a news report.
- B. It adopts the tone of an official government statement.
- C. It imitates the viewpoint of an eyewitness at the scene.
- D. It reflects the hindsight of a chronicler aware of the disaster's magnitude. ✓

Q77

What main idea does the passage convey by showing an ordinary morning before the attacks?

- A. That peaceful normalcy can hide approaching danger ✓
- B. That political activity was the focus of the morning
- C. That weather conditions caused travel problems
- D. That life in America was dull and repetitive

Q78

In the context of the phrase 'an ordinary day in the capital', which term expresses the opposite meaning of 'ordinary'?

- A. Monumental ✓
- B. Routine
- C. Predictable
- D. Civil

Q79

If each of the digits in the number cluster 5389436 is arranged in ascending order from left to right, the position of how many digits will remain unchanged as compared to that in the original number?

- A. Four
- B. Three
- C. Two
- D. One ✓

Q80

Each of G, H, I, J, N, O and P has a flight on a different day of a week starting from Monday and ending on Sunday of the same week. Only three people have a flight between H and G. Only one person has a flight between P and N. O has a flight immediately the day before I. Only two people have a flight before H. J doesn't have a flight on Friday. P has a flight immediately after J. How many people have a flight before J?

- A. Three
- B. Two
- C. None ✓
- D. One

Q81

Six boxes A, B, C, D, E, and F are kept one over the other but not necessarily in the same order. D is kept third from the bottom. Only one box is kept between D and F. A is kept immediately below B. C is kept immediately below D. E is kept immediately above B. Which box is third from the top?

- A. E
- B. B
- C. F
- D. A ✓



Q82

Sonali has a hemispherical pot having a radius of 21 cm. How much water (in litres) can be filled in it?

(Use $\pi = \frac{22}{7}$)

A. 38.808

B. 28.702

C. 9.702

D. 19.404



Q83

The simplified value of $\frac{(63^{10} \times 2^{13} \times 28^{19})}{(63^9 \times 2^{12} \times 28^{18})}$ is

A. 3536

B. 3528

C. 3530

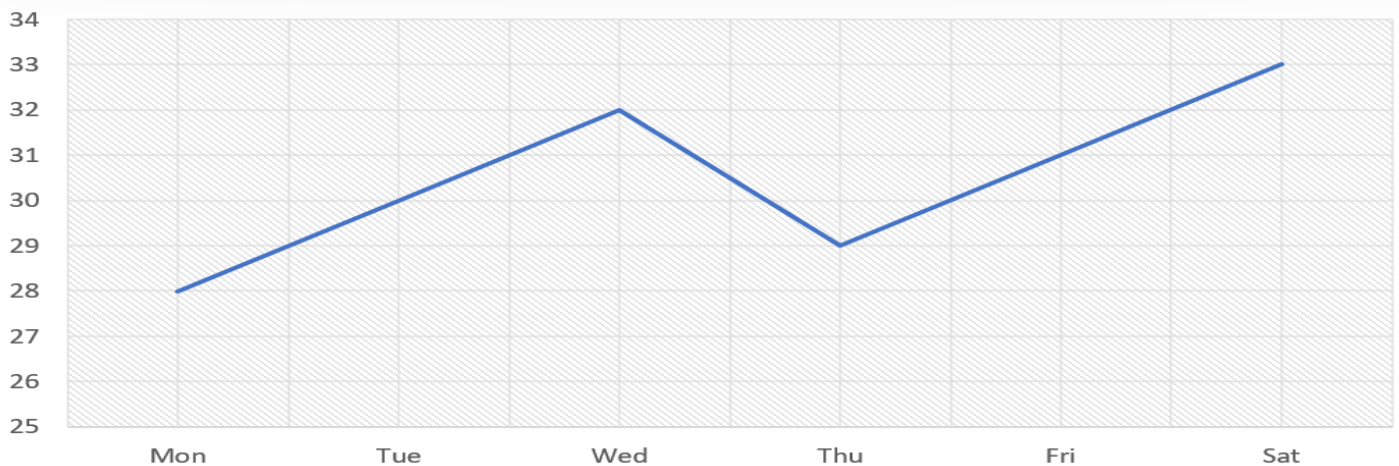
D. 3527



Q84

Study the line graph and answer the question that follows.

The given line graph shows the temperature in °C in a city over six days.



What is the difference between the maximum and minimum temperatures recorded?

A. 7°C

B. 5°C

C. 6°C

D. 4°C



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Q85

A can complete a piece of work in 21 days and B can complete it in 11 days. If they work on alternate days, starting with B on the first day, then in how many days will the work be completed?

A. 14

B. $15\frac{1}{3}$

C. 15

D. $14\frac{1}{3}$



Q86

The simplified value of $81 - [54 - (56 \div 8 - (18 - 32 \div 4) \div 4)]$ is:

A. $\frac{63}{2}$



B. $\frac{73}{2}$

C. $\frac{65}{2}$

D. $\frac{71}{2}$

Q87

The following data gives the information on the observed lifetime (in hours) of 225 electronic components.

Lifetime (in hours)	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60
Number of electronic components	11	36	52	61	37	28

What is the modal lifetime (in hours, rounded to 2 decimal places) of the components?

A. 33.72

B. 37.32

C. 32.73

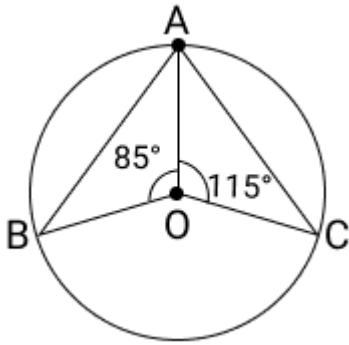


D. 32.33



Q88

In the given figure, O is the centre of the circle. Find $\angle BAC$.



A. 65°

B. 84°

C. 72°

D. 80°



Q89

The simplified value of $\frac{70}{33} \times (95 + 40) + 24$ is

A. $\frac{3406}{11}$

B. $\frac{3414}{11}$

C. $\frac{3405}{11}$

D. $\frac{3422}{11}$



Q90

$\angle DPE$ has measurement of 84° $\angle PQR + \angle PRQ = 120^\circ$ $\angle ROQ$ has measurement of 116°
 $\angle EOD$ is a right angle

A. $\angle DPE$ has measurement of 84°

B. $\angle EOD$ is a right angle

C. $\angle ROQ$ has measurement of 116°

D. $\angle PQR + \angle PRQ = 120^\circ$



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Q91

Five car accidents occurred in a week. What is the probability that they all occurred on the same day?

A. $\frac{1}{5^7}$

B. $\frac{1}{5^4}$

C. $\frac{1}{7^5}$

D. $\frac{1}{7^4}$



Q92

A hemispherical dome of radius 14 m is to be painted both inside and outside. If the cost of painting is ₹45 per m^2 and a platform costing ₹1,200 is needed for the work, find the total cost. (Use $\pi = \frac{22}{7}$)

A. ₹1,10,200

B. ₹1,12,080

C. ₹1,14,500

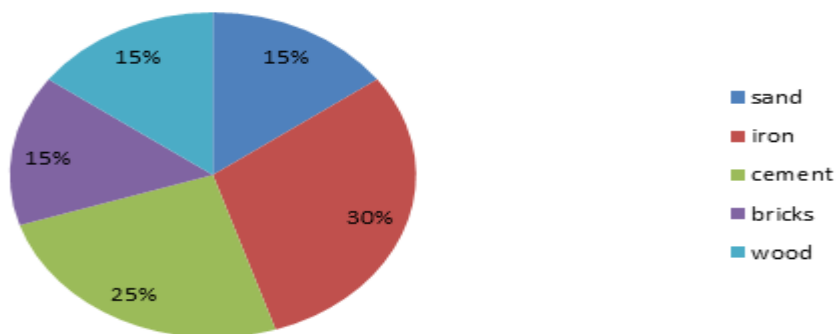
D. ₹1,08,500



Q93

The following pie chart shows the details of material used in the construction of a building. The total cost of construction is ₹25,00,000. Study the chart and answer the question that follows.

Details of Material used in the construction of a building



Calculate the expenditure on iron, bricks and cement used in the construction of the building.

A. ₹15,50,000

B. ₹17,50,000

C. ₹14,50,000

D. ₹12,50,000



Q94

A circular ground has a radius of 42 meters. A running track surrounds this ground, and it is 7 meters wide. Find the outer perimeter of the running track. (Use $\pi = \frac{22}{7}$)

A. 154 meters

B. 308 meters



C. 254 meters

D. 224 meters

Q95

The following table shows the wages (in ₹) of a group of workers.

Wages (in ₹)	20-30	30-40	40-50	50-60	60-70
Number of Workers	25	12	15	13	5

Find the median wage. (Round your answer to the nearest paise.)

A. 38.33



B. 36.75

C. 34.25

D. 39.25

Q96

$$\left(\frac{17}{2}\right)^4 \times \left(\frac{2}{17}\right)^6 \times \left(\frac{17}{2}\right)^3 = \left(\frac{2}{17}\right)^{4m+16}$$

A. $-\frac{15}{4}$

B. $-\frac{9}{4}$

C. $-\frac{17}{4}$



D. $-\frac{13}{4}$



Q97

Find mode for the following distribution.

Class interval	Frequency
0-80	8
8-16	7
16-24	16
24-32	24
32-40	15
40-48	7

(Round off your answer to two decimal places)

A. 24.86

B. 29.16

C. 23.56

D. 27.76



Q98

The curved surface area and the total surface area of a cylinder are in the ratio 1:16. If the total surface area of the right cylinder is 6028.8 cm², then its volume (in cm³) is:

(Take $\pi = 3.14$)

A. 5656

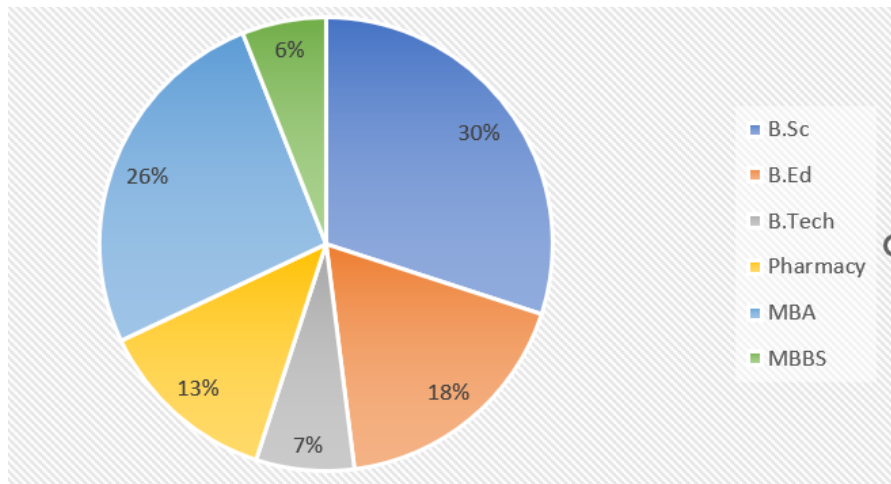
B. 5648

C. 5624

D. 5652



Q99



A. 715

B. 765

C. 650

D. 635



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Q100

Two fair six-sided dice which have numbers from 1 to 6 on their faces are rolled. What is the probability that the sum of the numbers rolled is greater than 8?

A. $\frac{5}{18}$



B. $\frac{4}{9}$

C. $\frac{1}{3}$

D. $\frac{1}{5}$



Q1

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some cranes are marbles.
All marbles are balls.

Conclusions:

- (I) Some cranes are balls.
(II) All balls are marbles.

A. Both conclusions (I) and (II) follow.

B. Only conclusion (I) follows. ✓

C. Neither conclusion (I) nor (II) follows.

D. Only conclusion (II) follows.

Q2

In the following series, only one letter-cluster is incorrect. Select the INCORRECT letter-cluster.

YEK UAG QWC MSY IOV EKQ

A. EKQ

B. QWC

C. MSY

D. IOV ✓

Q3

The average of 8 numbers is 59. If each number is increased by 6, what will the new average be?

A. 71

B. 65 ✓

C. 59

D. 8

Q4

An arithmetic progression has 32 as its first term and 48 as its last term, with a total of 12 terms. What is the sum of these 12 terms?

A. 482

B. 478

C. 480 ✓

D. 479

Q5

A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6. B lives on an odd numbered floor but not on floor number 5. Only three people live between C and A. A lives immediately below B. F lives immediately above E. How many people live between D and F?

A. None

B. Two

C. One

D. Three ✓

Q6

Calculate the volume of a cube whose side length is 23 millimetres.

A. 12,167 mm³ ✓

B. 12,157 mm³

C. 12,147 mm³

D. 12,177 mm³

Q7

If 2 is added to each odd digit and 1 is subtracted from each even digit in the number 1324756, then what will be the sum of the digits that are second from the left and second from the right in the new number thus formed?

A. 6

B. 7

C. 12 ✓

D. 5

Q8

Refer to the following letter-symbol series and answer the question that follows. Counting is to be done from left to right only.

(Left) K @ % H U # A W N * Z Σ V F Ω L \$ E P & M (Right)

How many such symbols are there each of which is immediately preceded by a vowel but not immediately followed by a vowel?

A. One

B. Three

C. None ✓

D. Two



Q9

The sum of two positive numbers is 76 and their product is 1408. The positive difference between them is:

- A. 8
- B. 5
- C. 9
- D. 12



Q10

An item is marked 154% higher than its cost price. Even after allowing some discount, the shopkeeper earns a 27% profit. Find the discount percentage allowed by the shopkeeper.

- A. 53%
- B. 50%
- C. 48%
- D. 47%



Q11

Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

- A. QV - SX
- B. SX - UZ
- C. OI - LK
- D. MR - OT



Q12

A shopkeeper buys an article for ₹2,400 and marks it for sale at a price that gives him 80% profit on his cost price. He, however, gives a 41% discount on the marked price to his customer. Find the actual profit made by the shopkeeper.

- A. ₹148.80
- B. ₹147.80
- C. ₹146.80
- D. ₹149.80



Q13

The average height of 16 boys out of a class of 50 boys is 160 cm. If the average height of the remaining boys is 168 cm, then the average height of the whole class (in cm) is:

- A. 164
- B. 165.44
- C. 166.44
- D. 165



Q14

What will come in the place of the question mark (?) in the following equation, if '+' and '-' are interchanged and 'x' and '÷' are interchanged?

$$96 \times 16 - 13 \div 12 + 28 = ?$$

- A. 132
- B. 131
- C. 134
- D. 133



Q15

A, B, C, D, J, K, L and M are sitting around a square table, facing the centre of the table. Some of them are sitting at the corners while some are sitting at the exact centre of the sides.

Only three people sit between L and M. L sits at the centre of one of the sides. A sits second to the left of M. D sits second to the right of C. J sits at one of the corners and is not an immediate neighbour of M. Only three people sit between D and K. J is not an immediate neighbour of B. Who sits fourth to the left of B?

- A. K
- B. J
- C. M
- D. A



Q16

A garrison of 1,210 men has provisions for 16 days. How long (in days) will the provisions last if the garrison be increased by 550 men?

- A. 10
- B. 12
- C. 9
- D. 11



Q17

3 chairs and 15 tables cost ₹6300 and 7 chairs and 12 tables cost ₹7800. What is the cost of 11 chairs and 16 tables?

A. ₹11404

B. ₹11397

C. ₹11398

D. ₹11400 **Q18**

In a cloth store, 10 varieties of sarees are arranged on two parallel racks. Rack 1 is facing towards the South and it has the following variety of sarees: A, B, C, D and E. Rack 2 is facing towards the North and it has the following variety of sarees: F, G, H, I and J. Thus, each saree in Rack 1 is placed in front of a saree in Rack 2 and vice versa. Variety D and B sarees are placed at extreme ends and are opposite Variety I and G sarees on the opposite rack, respectively. Variety C is at the middlemost position and is opposite neither H nor J. Variety A sarees are placed to the immediate right of B, H is not the saree variety opposite to Variety A. Which variety of sarees are opposite H?

A. B

B. D

C. A

D. E **Q19**

Refer to the following number series and answer the question that follows. Counting is to be done from left to right only. (All numbers are single-digit numbers only.)

(Left) 2 6 4 6 2 6 7 3 8 6 3 1 8 6 1 9 8 9 1 7 7 6 3 7 5 5 2
(Right)

How many such odd numbers are there that are immediately preceded by an odd number and also immediately followed by an odd number?

A. Six

B. Five

C. Three

D. Four **Q20**

Based on the English alphabetical order, three of the following four letter cluster pairs are alike in a certain way and thus form a group. Which is the one that does NOT belong to that group? (Note: The odd man out is not based on the number of consonants/vowels or their position in the letter cluster.)

A. MQ - PT

B. EI - HL

C. LO - NL 

D. IM - LP

Q21

The average of 41 numbers is 36. The average of the first 19 numbers is 57 and the average of the last 23 numbers is 30. If the 19th number from the beginning is excluded, then what is the average of the remaining numbers?

A. 27.1

B. 33.689

C. 29.475 

D. 25.25

Q22

A man buys 12 identical articles for a total of ₹20. If he sells each of them for ₹2.1, then what is his profit percentage?

A. 27%

B. 20.63%

C. 26% 

D. 21.63%

Q23

The circumference of the base of a cylindrical vessel is 300 cm and its height is 88 cm. How many litres of water can it hold?

A. 630 

B. 679

C. 582

D. 645



Q24

Two sets of numbers are given below. In each set of numbers, certain mathematical operation(s) on the first number result(s) in the second number. Similarly, certain mathematical operation(s) on the second number result(s) in the third number and so on. Which of the given options follows the same set of operations as in the given sets?
(NOTE: A two/three digit number cannot be broken into individual digits for operations. E.g.: If 37 is followed by 10, the operation cannot be $3 + 7$ as a two digit number cannot be broken into individual digits.)

20 – 33 – 27 – 35
15 – 28 – 22 – 30

A. 8 – 21 – 15 – 23



B. 4 – 17 – 23 – 31

C. 7 – 20 – 14 – 6

D. 9 – 22 – 16 – 25

Q25

A man incurs a loss of 12% by selling an article for ₹264. If he sells it for ₹495, what will be his gain percentage?

A. 60%

B. 64%

C. 62%

D. 65%

**Q26**

The length (in mm) of the shoes of few students were measured and observations are as under. Find the median length of the shoes (in mm).

Length: 123 124 122 120 121 125

Number of students: 6 8 10 12 15 9

A. 121

B. 124

C. 123

D. 122

**Q27**

An article is currently priced at ₹10,000. Its price increases by 26% in the first year and by 65% in the second year, but then decreases by 20% in the third year. What will be the price (in ₹) of the article at the end of the third year?

A. 16,632



B. 16,634

C. 16,637

D. 16,628

Q28

The area of the base of a right circular cone is 2464 cm^2 and its height is 45 cm. What is the curved surface area of the cone?

(Use $\pi = 22/7$)

A. 4224 cm^2

B. 3646 cm^2

C. 4664 cm^2



D. 5058 cm^2

Q29

An arithmetic progression has 54 as its first term and 72 as its last term, with a total of 10 terms. What is the sum of these 10 terms?

A. 627

B. 632

C. 631

D. 630

**Q30**

A solid hemisphere of radius 14 cm is melted and recast into small hemispheres each of radius 7 cm. How many small hemispheres are formed?

A. 6

B. 8



C. 16

D. 27

Q31

What is the central theme of the passage?

A. The formative influences and later recognition of Van Gogh's art



B. The tragic and melancholic love life of Vincent Van Gogh

C. The role of French painters in Dutch culture

D. The religious background of Dutch painters

Q32

What is the ANTONYM of 'solitary' as used in the passage?

A. Lonely

B. Reserved

C. Sociable



D. Thoughtful



Q33

The fourth proportional of the numbers x , $(x+2)$ and $3x$ is 33. Find the second proportional; x is a natural number.

- A. 18
- B. 9
- C. 11
- D. 27



Q34

Which of the following is a fact stated in the passage?

- A. Van Gogh was never influenced by French artists.
- B. He worked as a lay preacher in England.
- C. He enjoyed his work as an art dealer.
- D. He was the youngest of six children.



Q35

Each of G, H, I, J, N, O and P has a flight on a different day of the week, starting from Monday and ending on Sunday of the same week. Only I has a flight after H. Only three people have flights between N and H. Only three people have flights between O and I. J has a flight on some day before P and on some day after G. How many people have flights between G and J?

- A. One
- B. Four
- C. Three
- D. Two



Q36

Which title best captures the essence of the passage?

- A. A Short History of Dutch Paintings and their influence
- B. The Art Dealers of Paris and London
- C. Van Gogh: A Miserable Life
- D. The Early Life and Lasting Influence of Van Gogh



Q37

In the following series, only one letter-cluster is incorrect. Select the INCORRECT letter-cluster.

FLR BHN XDJ TZF PVA LRX

- A. TZF
- B. LRX
- C. XDJ
- D. PVA



Q38

What best describes the tone of the passage?

- A. Admiring and informative
- B. Melancholic and bitter
- C. Critical and sceptical
- D. Humorous and playful



Q39

At a health club, 44% of the members are women and 56% of the members are men. If the average age of the men is 52 years and the average age of the women is 67 years, what is the average age (in years) of all the members?

- A. 68.4
- B. 56.5
- C. 58.6
- D. 66.4



Q40

A total of ₹14,800 is to be divided among A, B, and C such that 6 times of A's share = 4 times of B's share = 5 times of C's share. Find A's share.

- A. ₹3,990
- B. ₹4,000
- C. ₹4,076
- D. ₹3,867



Q41

Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

- A. SU-WY
- B. DF-HK
- C. PR-TV
- D. IK-MO



Q42

Refer to the given letter, symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) # F * G W # C # Y R & @ W Z @ L & L N % # W (Right)

How many such letter are there, each of which is immediately preceded by a symbol and also immediately followed by a symbol?

A. 5

B. 4

C. 2

D. 3



Q43

A cuboid of dimension 48 cm by 80 cm by 96 cm is to be divided into identical cubes. With the maximum possible value of side of the identical cube possible, find the total volume of all the cubes (in cm^3).

A. 2,14,230

B. 5,52,960

C. 1,61,440

D. 3,68,640



Q44

All 46 students in a class are standing in a row facing north. Jaya is 15th from the right end, while Sanjay is 26th from the left end. How many people stand between Jaya and Sanjay?

A. 4

B. 7

C. 5



D. 6

Q45

If the perimeter of a square and rectangle are 40 cm each and the difference in their areas is 4 cm^2 , find the difference between the length and breadth of the rectangle (in cm).

A. 8

B. 6

C. 2

D. 4



Q46

Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of ::?

: INQ :: FKO : %

A. # = RTP, % = DEJ

B. # = TJV, % = HEL

C. # = SRP, % = GFE

D. # = LQU, % = CHK



Q47

Which of the following is the most suitable title for the passage?

A. Convicting the Criminals: How to Recognise Faces

B. The Evolution of CCTV Technology

C. Artificial Intelligence in Criminal Detection

D. Faces Behind the Masks: The Rise of Super-Recognisers



Q48

Identify the tone of the passage.

A. Dramatic and emotional

B. Factual and explanatory



C. Humorous and casual

D. Persuasive and critical

Q49

What percentage of people are estimated to be super-recognisers?

A. 20–25%

B. 1–2%



C. 15–18%

D. 5–10%

Q50

The H.C.F. and the L.C.M. of two numbers are 34 and 408, respectively. If one of the numbers is 102, then find the other number.

A. 64

B. 122

C. 121

D. 136



Q51

What does the passage imply about human versus machine recognition?

- A. Machines outperform humans in identifying subtle facial traits.
- B. Human memory is unreliable in criminal investigations.
- C. Both perform equally well under pressure.
- D. Humans remain superior in complex facial identification tasks. ✓

Q52

The mode of the following data is 8. Find the value of f.

Class Intervals	frequency
0 - 6	13
6 - 12	f
12 - 18	7
18 - 24	10
24 - 30	8

- A. 21
- B. 16
- C. 15
- D. 19 ✓

Q53

The phrase "exceptional precision" most nearly means _____.

- A. minor detail
- B. average accuracy
- C. unusual clarity ✓
- D. frequent confusion

Q54

The ratio of the speed of a boat in still water to the speed of a stream is 16:5. A boat goes 16.5 km upstream in 45 minutes. Find the time (in minutes) taken by the boat to cover 17.5 km downstream.

- A. 30
- B. 25 ✓
- C. 22
- D. 27

Q55

Identify the most appropriate title for the passage.

- A. The Adolescent Brain: A Work in Progress ✓
- B. Understanding Early Childhood Development
- C. The Hormonal Havoc of Adolescence
- D. Emotional Turbulence in Teenage Years

Q56

The tone of the passage can best be described as _____.

- A. analytical and informative ✓
- B. persuasive and argumentative
- C. nostalgic and emotional
- D. critical and disapproving

Q57

According to the passage, which part of the brain matures last?

- A. The hippocampus
- B. The cerebellum
- C. The limbic system
- D. The frontal cortex ✓

Q58

What will come in place of the question mark (?) in the following equation if '+' and '-' are interchanged and 'x' and '÷' are interchanged?

$$15 \div 2 - 63 \times 7 + 11 = ?$$

- A. 25
- B. 36
- C. 28 ✓
- D. 30

Q59

Which statement best captures the author's viewpoint?

- A. Emotional decisions are superior to logical ones.
- B. The adolescent brain provides an ideal period for skill refinement. ✓
- C. Teenagers' brains are fixed and resistant to change.
- D. Brain connections weaken with practice.



Q60

In the following triads, each group of letters is related to the subsequent one following a certain logic. Select from the given options, the one which follows the same logic.

FLAP - LAFF - PALF
COIN - OICN - NIOC

A. HALF - ALHF - FLAH



B. GOLF - GLOF - FLOG

C. BASE - ABSE - EASB

D. DISC - ISDC - ISCD

Q61

The word 'pruning' as used in the text suggests

A. neglecting connections

B. adding new structures

C. cutting down to enhance growth



D. planting new ideas

Q62

On a 2295 m long circular track, Siddharth finishes one round in 85 seconds and Yash finishes one round in 45 seconds. How many different meeting points are there on the track if they are running in the opposite directions?

A. 20

B. 36

C. 26



D. 33

Q63

A shopkeeper marks an article at 30% above the cost price and allows a discount of 10%. Find his profit percentage.

A. 20%

B. 15%

C. 12%

D. 17%



Q64

There are 6,200 candidates appeared in a CAT examination and the ratio of boys to girls in the school is 23 : 39. Find the number of boys appeared in the CAT examination.

A. 2,304

B. 2,293

C. 2,306

D. 2,300



Q65

In a certain code language,
A @ B means 'A is the sister of B'
A # B means 'A is the wife of B'
A ≠ B means 'A is the father of B'
A + B means 'A is the brother of B'
Based on the above, how is F related to V if 'F # G ≠ S @ T + V'?

A. Sister

B. Wife

C. Mother's mother

D. Mother



Q66

Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of ::?

: SNJ :: QLH : %

A. # = MHD, % = WRN



B. # = MNM, % = AZN

C. # = OPD, % = WVN

D. # = IOD, % = WNB

Q67

By how much is 30% of 65 greater than 35% of 30?

A. 4

B. 9



C. 11

D. 6

Q68

If a data set has a median of 92 and a mean of 84, what is the value of the mode?

A. 98

B. 96

C. 108



D. 102



Q69

What will come in place of the question mark (?) in the following equation, if '+' and '-' are interchanged and 'x' and '÷' are interchanged?

$$38 \div 5 - 14 + 26 \times 2 = ?$$

A. 197

B. 195

C. 203

D. 191



Q70

Find the median of all the odd numbers between 520 and 550.

A. 537

B. 531

C. 533

D. 535



Q71

In a certain code language, 'DENT' is coded as '6924' and 'PADS' is coded as '1359'. What is the code for 'D' in the given code language?

A. 5

B. 9



C. 3

D. 6

Q72

The least number which when increased by 7 is divisible by each of the numbers 32, 36, 54 and 64 is:

A. 1632

B. 1721



C. 1245

D. 1439

Q73

Find the mode for the following data representing weekly wages (₹) of workers.

Wage Range (₹)	Frequency
200-250	6
250-300	12
300-350	20
350-400	25
400-450	10
450-500	7

A. 362.5



B. 364

C. 360.5

D. 361

Q74

Three varieties of wheat are mixed in the ratio (weight in kgs) of 4:5:8. When 5 kg of the first variety, 10 kg of the second variety and P kg of the third variety are added to the mixture, the ratio becomes 5:7:9. Find the value of P.

A. 5.5

B. 5



C. 4.5

D. 4

Q75

What should come in place of the question mark (?) in the given series?

451 450 460 458 470 467 481 ?

A. 478

B. 476

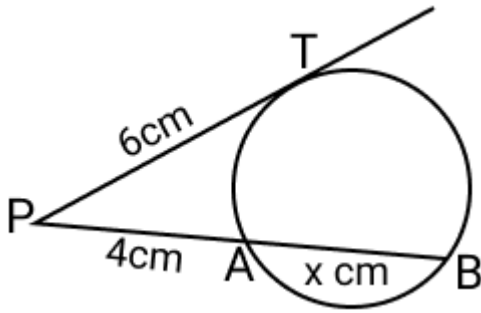
C. 479

D. 477



Q76

In the given figure, PAB is a secant and PT is a tangent to the circle from P. If $PT = 6$ cm, $PA = 4$ cm and $AB = x$ cm, then x is equal to:



A. 5



B. 4

C. 3

D. 6

Q77

f_i

A. 3.12

B. 2.42

C. 3.32



D. 2.46

Q78

Find the value of y , satisfying $23 \times 7 \times 616 \div \sqrt{3136} = y + 506$

A. 1271

B. 1265



C. 1275

D. 1256



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Q79

The value of $\frac{2}{8} + \frac{4}{8} + \frac{5}{16} + \frac{2}{8} - 4$ is

A. $-\frac{53}{16}$

B. $-\frac{45}{16}$

C. $-\frac{33}{16}$

D. $-\frac{43}{16}$ ✓

Q80

If $x-1$ is the mean proportion between $x-2$ and $x-8$, then find the value of x .

A. $\frac{15}{7}$

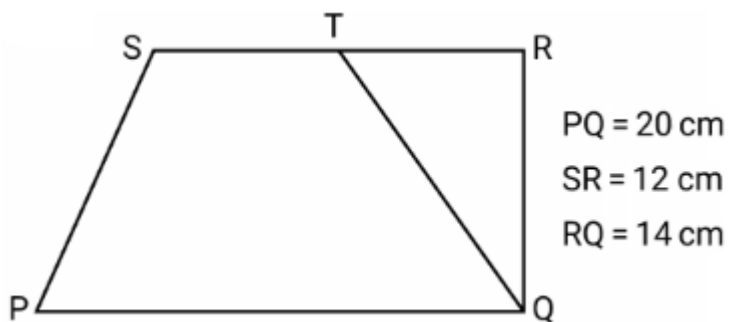
B. $\frac{15}{8}$ ✓

C. $\frac{5}{3}$

D. $\frac{5}{4}$

Q81

In the following figure PQRS, $PQ \parallel RS$ and angle $R = 90^\circ$. If the area of triangle $QRT = 42 \text{ cm}^2$, then find the area of PQST (in cm^2).



A. 182 ✓

B. 204

C. 220

D. 198



Q82

The simplified value of $\frac{66}{18} \times (82 + 41) + 34$ is

A. 491

B. 477

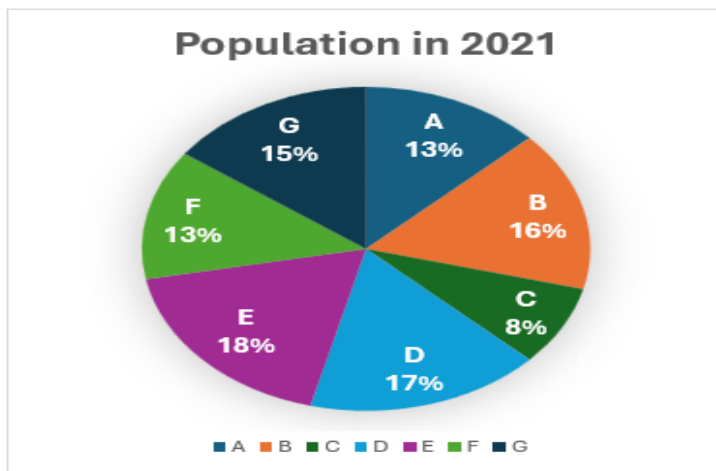
C. 485



D. 480

Q83

Study the pie chart to answer the question that follow. The population proportion of seven towns in 2021 is shown in the pie chart.



If the total population of all the towns is 3,07,500 and 40% of the population of the town G is under poverty line. The number of people under poverty line of town G is:

A. 18,540

B. 19,450

C. 18,450



D. 19,540

Q84

If 135 kg of corn feeds 45 horses for 8 days, for how long will the same quantity of corn feed 24 horses?

A. 15 days



B. 18 days

C. 13 days

D. 17 days

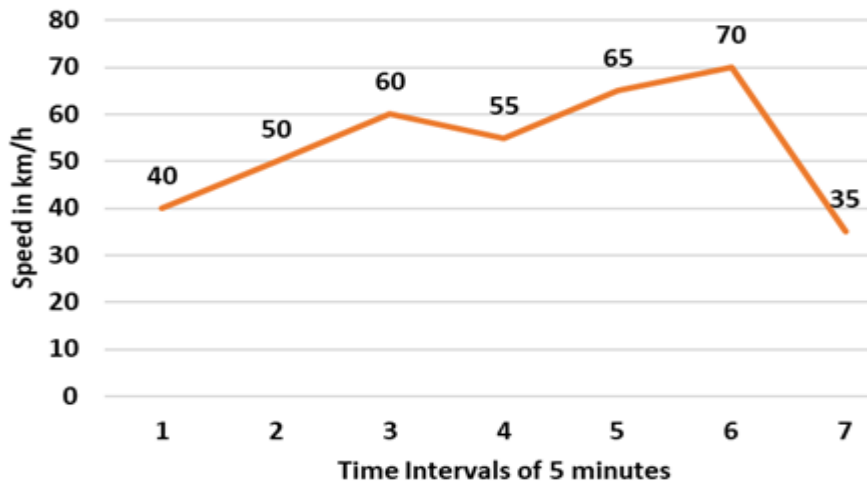


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Q85

The graph depicts the speed at which Rishi travels to office, where on the X-axis the intervals mentioned are at the end of every 5 minutes. What is the time taken (in minutes) for Rishi's constant increase of speed from 55 km/h to a speed of 70 km/h?



A. 15

B. 20

C. 5

D. 10



Q86

Two dice are thrown simultaneously. The probability that the sum of the numbers on the faces turned up exceeds 7 is:

A. $\frac{5}{12}$



B. $\frac{13}{36}$

C. $\frac{11}{36}$

D. $\frac{7}{12}$



Q87

$$\pi = \frac{22}{7}$$

A. $785\frac{5}{7}\text{cm}^3$



B. $785\frac{6}{7}\text{cm}^3$

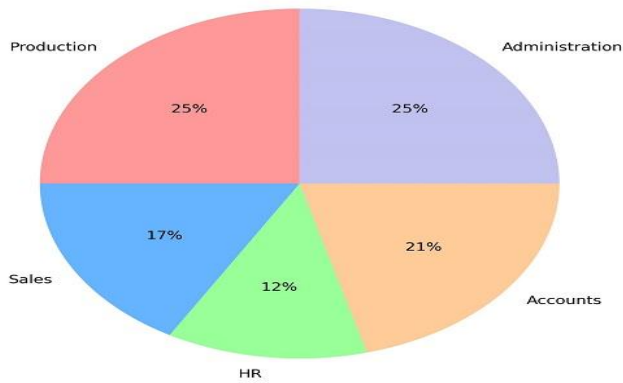
C. $685\frac{5}{7}\text{cm}^3$

D. $685\frac{6}{7}\text{cm}^3$

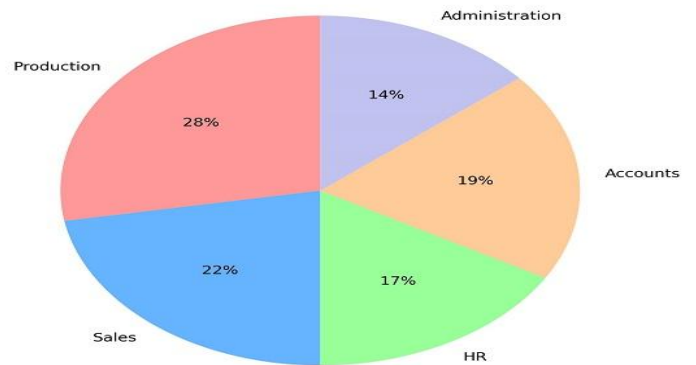
Q88

The pie charts given below illustrate the distribution of male and female employees across various departments in a company.

Distribution of Men in Departments



Distribution of Women in Departments



If there are 600 men and 900 women in the company, find the total number of workers in the Production department.

A. 450

B. 500

C. 402



D. 350



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Q89

Study the given table carefully and answer the questions that follow. The given table indicates the production of different types of cars (in thousands) from 1998 to 2003.

Year Types	1998	1999	2000	2001	2002	2003
A	36	34	40	35	43	45
B	20	22	25	23	20	16
C	14	30	16	25	30	35
D	60	40	45	55	60	60
E	40	44	48	50	80	100

In which year is the total production of A and D together equal to the total production of C and E together?

A. 1998

B. 2000

C. 1999



D. 2001

Q90

The simplified value of $\frac{(38^6 \times 2^4 \times 96^{16})}{(38^5 \times 2^3 \times 96^{15})}$ is

A. 7296



B. 7301

C. 7290

D. 7295

Q91

A can complete a piece of work in 12 days and B can complete it in 18 days. If they work on alternate days, starting with B on the first day, then in how many days will the work be completed?

A. 15

B. $15\frac{1}{2}$

C. 14

D. $14\frac{1}{2}$



Q92

Find the area of the triangle whose sides are in the ratio of 7:4:8 with a perimeter of 38 cm.

A. $\sqrt{2135} \text{ cm}^2$

B. $\sqrt{3135} \text{ cm}^2$



C. 55 cm^2

D. 60 cm^2



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Q93

$$\frac{767\pi}{3} \quad \frac{770\pi}{3} \quad \frac{769\pi}{3} \quad \frac{772\pi}{3}$$

A. $\frac{767\pi}{3}$

B. $\frac{769\pi}{3}$

C. $\frac{770\pi}{3}$

D. $\frac{772\pi}{3}$ 

Q94

Find the probability that a randomly chosen number from the first 80 natural numbers is either a perfect square or divisible by 7.

A. $\frac{9}{40}$ 

B. $\frac{5}{42}$

C. $\frac{9}{37}$

D. $\frac{7}{40}$

Q95

Fourth proportion to 12, 18 and 6 is same as the third proportion to 4 and k. What is the positive value of k?

A. 8

B. 6 

C. 4

D. 7



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Q96

$$\left(\frac{24}{7}\right)^5 \times \left(\frac{7}{24}\right)^{16} \times \left(\frac{24}{7}\right)^6 = \left(\frac{7}{24}\right)^{8m+4}$$

A. $\frac{7}{8}$

B. $\frac{1}{8}$ ✓

C. $-\frac{1}{8}$

D. $\frac{5}{8}$

Q97

Find the value of the following expression.

$$5^2 + 10^2 + 15^2 + \dots + 50^2$$

A. 8625

B. 9525

C. 9625 ✓

D. 10525

Q98

The volume of a cylinder having height 49 cm and radius 17 cm is _____.

$$\text{Use } \pi = \frac{22}{7}$$

A. 44506 cm³ ✓

B. 44492 cm³

C. 44580 cm³

D. 44426 cm³

Q99

$$\angle BAD = \angle EAC$$

A. $BC = BA$

B. $BC < DE$

C. $BC > DE$

D. $BC = DE$ ✓



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Q100

If the mode of a grouped data is 45.2, lower limit of modal class is 40, class width is 10, $f_1 = 25$, $f_0 = 18$, what is the value of f_2 ? (Rounded off to the nearest whole number)

A. 16

B. 18

C. 19



D. 20



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Q1

The 7-digit number 82A337B is divisible by 3. What is the maximum value of (A + B)?

A. 17

B. 16



C. 11

D. 18

Q2

The marks of 9 students are:

18, 22, 25, 28, 30, 35, 38, 40, 45.

If the marks of the students who scored 45 are replaced by 50, find the new median.

A. 30



B. 25

C. 29

D. 28

Q3

What will come in place of the question mark (?) in the following equation if '+' and '-' are interchanged and 'x' and '÷' are interchanged?

$$123 \div 4 - 4277 \times 7 + 54 = ?$$

A. 1023

B. 1049



C. 1103

D. 1140

Q4

In the following series, only one letter-cluster is incorrect. Select the INCORRECT letter-cluster.

WQK AUO EYS ICW MGA QKC

A. ICW

B. EYS

C. MGA

D. QKC



Q5

Seven boxes, G, H, I, J, N, O and P, are kept one over the other but not necessarily in the same order. Only two boxes are kept below G. H is kept immediately above G. N is kept immediately above I. Only one box is kept above O. P is kept at some place below J. How many boxes are kept between J and N?

A. Four



B. Two

C. Three

D. One

Q6

10 chairs and 5 tables cost ₹2400 and 16 chairs and 6 tables cost ₹3200. What is the cost of 5 chairs and 7 tables?

A. ₹2642

B. ₹2637

C. ₹2638

D. ₹2640



Q7

If x is inversely proportional to y, and y = 21 when x = 30, find the value of x, when y = 5.

A. 117

B. 126



C. 135

D. 129

Q8

Which of the following options most accurately states the main idea of the passage?

A. The degradation of global wetlands has directly led to a 35% decline in coverage since 1970, increasing waterborne diseases.

B. The critical role of biodiversity in supporting essential ecosystem services, human health, and sustainable food systems.



C. Nutrition and biodiversity are interconnected at various levels, impacting the micronutrient availability in food.

D. Biodiversity loss is occurring 10 to 100 times faster than the natural baseline due to deforestation and climate change.



Q9

Which is the best description of the tone of the passage?

- A. Highly emotional and dramatic
- B. Analytical and detached
- C. Humorous and casually descriptive
- D. Urgent and cautionary

Q10

What is the synonym of the word 'alarming' from the passage?

- A. resilient
- B. dramatic
- C. essential
- D. disturbing

Q11

Which of the following options represents the structure of the passage?

- A. Enumeration
- B. Generalisation-Example
- C. Chronological
- D. Problem-Cause-Effect

Q12

What is the antonym of the word 'fragmentation'?

- A. complexity
- B. separation
- C. destruction
- D. integration

Q13

The number of green balls and red balls in a bag is in the ratio 8:7. If there are a total of 105 balls, how many are red balls?

- A. 63
- B. 56
- C. 32
- D. 49

Q14

The volume of a cube is 1728 cm^3 . What is the surface area of the cube?

- A. 864 cm^2
- B. 872 cm^2
- C. 868 cm^2
- D. 664 cm^2

Q15

The circumference of the base of a cylindrical vessel is 440 cm and its height is 60 cm. How many litres of water can it hold?

- A. 924
- B. 928
- C. 936
- D. 886

Q16

Amit and Sumit started a business, investing amounts of ₹800 and ₹950, respectively. If Sumit's share in the profit earned by them is ₹570, what is the total profit (in ₹) earned by them together?

- A. 1124
- B. 900
- C. 1050
- D. 1122

Q17

In the following series, only one letter-cluster is incorrect. Select the INCORRECT letter-cluster.

YDI EJO KPO QVA WBG CHM

- A. WBG
- B. KPO
- C. QVA
- D. EJO

Q18

The total surface area (in m^2) of a cube, each of whose edges measures 238 m, is:

- A. 339882
- B. 339852
- C. 339834
- D. 339864



Q19

Select the pair which follows the same pattern as that followed by the two pairs given below. Both pairs follow the same pattern.

WYW-SUS
XZX-TVT

A. ACA-WYW



B. ABY-WYW

C. ACA-VYV

D. ABY-VXV

Q20

Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

A. SP - PR



B. OQ - JL

C. FH - AC

D. NP - IK

Q21

A right circular cone and a right circular cylinder have equal base and equal height. If the radius of the base and the height are in the ratio 12 : 5, then the ratio of the total surface area of the cylinder to that of the cone is:

A. 35 : 24

B. 29 : 21

C. 34 : 25



D. 33 : 26

Q22

Refer to the following letter series and answer the question that follows.

(Left) M E Q A K Q G Z Y B R I S O V C P F U H D (Right)

How many letters are there in the English alphabetical series between the letter which is second from the right end and second from the left end of the series?

A. Two



B. One

C. None

D. Three

Q23

Eight people are sitting in two parallel rows containing 4 people each in such a way that there is equal distance between adjacent persons.

In row 1, I, K, O and L are seated and all of them are facing south.

In row 2, S, W, Z and A are seated and all of them are facing north.

Thus, each person faces another person from the other row.

S sits third to the left of A. The one facing K is an immediate neighbour of A. O sits at some place to the right of K and is not facing W. I sits third to the right of L. Which of the following represents both people sitting at extreme ends of the line?

A. S, K

B. I, W

C. O, W

D. I, S



Q24

The mean of 50 scores is 87. It is later observed that two scores 52 and 37 were INCORRECTLY entered as 25 and 39, respectively. What is the correct mean of the 50 scores?

A. 87.5



B. 87

C. 99.5

D. 88

Q25

Read the given statement(s) and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statement(s).

Statements:

Some buckets are pictures.

Some pictures are chairs.

Conclusions:

(I): Some buckets are chairs.

(II): All chairs are pictures.

A. Both conclusions (I) and (II) follow

B. Neither conclusion (I) nor (II) follows



C. Only conclusion (II) follows

D. Only conclusion (I) follows



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Q26

Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of ::?

: OUH :: PVI : %

A. # = SWQ, % = HLM

B. # = UYX, % = KLG

C. # = SYL, % = LRE

D. # = SYW, % = KFJ

Q27

Refer to the given letter series and answer the question that follows. Counting to be done from left to right only.

(Left) B E Q A K Q H Z Y M R I S O V D P F U G C (Right)

How many letters are there in the English alphabetical series between the letter that is fifth from the right end and fifth from the left end of the series?

A. Six

B. Four

C. Three

D. Five

Q28

Seven boxes, G, H, I, J, N, O and P, are kept one over the other but not necessarily in the same order. Only N is kept below J. Only P is kept above H. Only G is kept between H and O. How many boxes are kept above I?

A. One

B. Two

C. Four

D. Three

Q29

A fruit vendor buys 7 dozen bananas for ₹378. If he spends ₹72 more to buy additional bananas at the same rate, how many bananas does he buy in total?

A. 90

B. 100

C. 97

D. 94

Q30

The average of 8 numbers is 59. If each number is increased by 7, what will the new average be?

A. 73

B. 59

C. 66

D. 8

Q31

Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster DOES NOT belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

A. MOQ

B. GIL

C. JLO

D. RTW

Q32

A shirt is listed at ₹192 with a discount of 25%. What additional percentage discount must be offered to the customer to bring the net price to ₹108?

A. 30%

B. 23%

C. 25%

D. 27%

Q33

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding to/subtracting from/multiplying with 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

19 - 3 - 16

3 - 1 - 2

A. 22 - 9 - 11

B. 50 - 25 - 35

C. 7 - 2 - 6

D. 19 - 4 - 15



Q34

A solid metallic sphere of radius 21 cm is melted and recast into a cone with base radius 14 cm and a cylinder with radius 7 cm. If the heights of the cone and cylinder are equal, what is their common height?

A. 108 cm



B. 106 cm

C. 104 cm

D. 105 cm

Q35

What should come in place of the question mark (?) in the given series?

717 720 710 714 705 710 702 ?

A. 710

B. 706

C. 712

D. 708

**Q36**

Median of the data 8, 4, 2, 1, 5, 3, 2, 1, 4, 2, 8, 1, 2, 9, 0, 4, 5, 4, 6, 7, 11, 3, 13, -1 is _____.

A. 3

B. 3.5

C. 4.5

D. 4

**Q37**

In what ratio must a grocer mix two varieties of rice worth ₹65 per kg and ₹89 per kg, so that if he sells the mixture at ₹123 per kg, he may gain 64%?

A. 17:10

B. 3:2

C. 9:7

D. 7:5

**Q38**

What will come in place of the question mark (?) in the following equation, if '+' and '-' are interchanged and 'x' and '÷' are interchanged?

$$124 \times 4 \div 8 - 92 + 26 = ?$$

A. 306

B. 322

C. 314



D. 298

Q39

A man incurs a loss of 24% by selling an article for ₹171. If he sells it for ₹234, what will be his gain or loss percentage?

A. Loss, 5%

B. Gain, 1%

C. Loss, 2%

D. Gain, 4%

**Q40**

If 'P' stands for '÷', 'Q' stands for 'x', 'R' stands for '+' and 'S' stands for '-', then what will come in place of the question mark (?) in the following equation?

$$76 P 4 R 12 Q 9 S 6 = ?$$

A. 118

B. 121



C. 120

D. 128

Q41

An article is currently priced at ₹11,875. Its price increases by 10% in the first year and by 44% in the second year, but then decreases by 30% in the third year. What will be the price of the article at the end of the third year?

A. 13,167



B. 13,166

C. 13,162

D. 13,168



Q42

The average height of 16 boys out of a class of 50 boys is 160 cm. If the average height of the remaining boys is 167 cm, then the average height of the whole class (in cm) is:

A. 165.76

B. 164.76

C. 163.5

D. 164.5

Q43

The average of 41 numbers is 42. The average of the first 13 numbers is 70 and the average of the last 29 numbers is 81. If the 13th number from the beginning is excluded, then what is the average of the remaining numbers?

A. 10.5

B. 0.86

C. 4.625

D. 2.268

Q44

The sum of the digits of the greatest number that will divide 1359, 1871 and 2767 leaving the same remainder 15 in each case is:

A. 10

B. 8

C. 9

D. 12

Q45

Based on the English alphabetical order, three of the following four letter cluster pairs are alike in a certain way and thus form a group. Which is the one that does NOT belong to that group? (Note: The odd man out is not based on the number of consonants/vowels or their position in the letter cluster.)

A. NQ - LO

B. LO - JM

C. HK - FL

D. PS - NQ

Q46

The sum of two positive numbers is 40 and their product is 76. The positive difference between them is:

A. 36

B. 49

C. 42

D. 26

Q47

The median of the data given below is ____, approximately.

Class	Frequency
0-25	6
25-50	4
50-75	9
75-100	5

A. 54.44

B. 55.55

C. 57.77

D. 56.66

Q48

The probability of an event A occurring is 0.6 and that of B occurring is 0.3. If A and B are mutually exclusive events, then the probability of neither A nor B occurring is:

A. 0.9

B. 0.2

C. 0.45

D. 0.1

Q49

In a certain code language,

A @ B means 'A is the daughter of B'

A # B means 'A is the son of B'

A ≠ B means 'A is the sister of B'

A + B means 'A is the father of B'

Based on the above, how is F related to V if 'F @ G + S ≠ T # V'?

A. Sister

B. Daughter

C. Wife

D. Sister's daughter



Q50

By how much is 30% of 60 greater than 30% of 35?

- A. 9.5
- B. 4.5
- C. 2.5
- D. 7.5

**Q51**

Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of :: ?

: HNJ :: RXT : %

- A. # = MNP, % = LOQ
- B. # = NTP, % = LRN
- C. # = NNB, % = UIN
- D. # = NXP, % = LIO

**Q52**

In a certain code language, 'CUTE' is coded as '7624' and 'SOUP' is coded as '1357'. What is the code for 'U' in the given code language?

- A. 7
- B. 5
- C. 3
- D. 6

**Q53**

A can complete a piece of work in 90 days. B is 80% less efficient than A. C is 50% more efficient than B. B and C work together for 36 days. A alone will complete the remaining work in:

- A. 67 days
- B. 72 days
- C. 71 days
- D. 77 days

**Q54**

For the frequency distribution of weights of sorghum ear-heads given in table below. Find the median.

Weights of ear heads (in g)	No of year head (f)	Cumulative frequency (f)
60-80	22	22
80-100	38	60
100-120	45	105
120-140	35	140
140-160	24	164
Total	164	

(Round off your answer to two decimal places)

- A. 109.24 g
- B. 109.78 g
- C. 1108.26 g
- D. 108.54 g

**Q55**

If 1 is added to each odd digit and 2 is subtracted from each even digit in the number 1325374, what will be difference between the highest and lowest digits in the number thus formed?

- A. 4
- B. 8
- C. 6
- D. 5

**Q56**

In an A.P., the common difference is -9 and the first term is 50. Find the 3rd term.

- A. 31
- B. 34
- C. 32
- D. 30

**Q57**

A sector is formed by opening out a cone of a base radius of 12 cm and a height of 9 cm. Then the radius of the sector is:

- A. 12 cm
- B. 6 cm
- C. 9 cm
- D. 15 cm



Q58

If a man travels at the rate of 48 kmph, he misses a train by 19 minutes. However, if he travels at the rate of 50 kmph, he reaches the station 8 minutes before the arrival of the train. Find the distance covered by him to reach the station.

A. 540 km



B. 531 km

C. 534 km

D. 546 km

Q59

The 30th term of the A.P. whose first and second terms are -2 and 13, is:

A. 435

B. 436

C. 433



D. 434

Q60

Which of the following statements presents a fact explicitly mentioned in the passage?

A. Psychohistory emerged as a minor branch of literature in modern psychology.

B. Freudian psychoanalysis has strengthened the documentary basis of history.

C. Traditional history followed fixed methods and focused on periods and leaders.



D. Historians today completely reject the use of analytical or causal explanation.

Q61

Which of the following best describes the structure of the passage?

A. It contrasts the traditional framework of history with the emerging trends of psychohistory.



B. It traces the chronological evolution of historical events across different civilisations.

C. It evaluates the failures of classical historiography through psychological examples.

D. It summarises the key achievements of historians who adopted Freudian theories.

Q62

Select the main theme of the passage.

A. The shift of historical study from traditional narrative to analytic and psychoanalytic approaches.



B. The growing influence of Freudian theory in interpreting anthropological phenomena.

C. The development of historical inquiry across different societies and chronological periods.

D. The continued emphasis on documentation and evidence in classical historical research.

Q63

Which of the following best summarises the passage?

A. The study of history continues to examine events and societies using structured methods.

B. Historical study has shifted from narrative accounts to analytic methods including psychohistory.



C. Historians have followed traditional methods while sometimes adopting new analytic approaches.

D. Psychohistory uses Freudian theory in historical research while challenging old methods.

Q64

Which of the following statements best describes the most appropriate connection of the passage to real-life situations?

A. The passage shows how historical analysis can predict future events using modern theories.

B. The passage shows how traditional approaches are always superior to new analytic methods.

C. The passage shows how every field must strictly follow narrative methods for credibility.

D. The passage shows how professional fields evolve by adopting new methods and perspectives.



Q65

According to the passage, what was the traditional belief about peptide hormones in the brain?

A. Peptide hormones could freely cross the blood-brain barrier to reach all brain regions.

B. Peptide hormones were widely produced throughout the brain in multiple locations.

C. Peptide hormones were made only by endocrine glands and the hypothalamus.



D. Peptide hormones were involved in cognitive processes rather than endocrine functions.



Q66

Select the option that the passage is primarily based upon.

- A. The established and standardized methods used to synthesize peptide hormones in laboratory conditions.
- B. The discovery and study of peptide hormones in regions of the brain beyond the hypothalamus. ✓
- C. The traditional and classical role of endocrine glands in regulating hormones throughout the body.
- D. The effects of peptide hormones on cognitive and behavioral functions and activities in humans.

Q67

Which of the following best describes the structure of the passage?

- A. It compares peptide hormones with other hormones in terms of production and activity.
- B. It evaluates the effects of peptide hormones on behavior and cognitive processes in animals.
- C. It traces the discovery of peptide hormones and explains their known functions in the brain.
- D. It presents traditional beliefs about peptide hormones and introduces modern detection methods. ✓

Q68

Which of the following inferences can be drawn from the passage?

- A. Peptide hormones have no significant role in brain function beyond endocrine signaling.
- B. Peptide hormones may be produced in multiple brain regions, not just the hypothalamus. ✓
- C. All detection methods for peptide hormones are precise and without limitations.
- D. Traditional beliefs about hormones in the brain were accurate and need no revision.

Q69

Which of the following is the most appropriate connection of the passage to real-life situations?

- A. All hormones in the human body function exactly as initially believed by scientists and require no further study.
- B. Scientific understanding evolves as new methods reveal that earlier assumptions may be inaccurate. ✓
- C. Laboratory methods are always perfectly precise and do not need improvements for biological research.
- D. Peptide hormones have no direct relevance to medicine or understanding of brain function in humans.

Q70

A man buys 12 identical articles for a total of ₹20. If he sells each of them for ₹2.5, then what is his profit percentage?

- A. 33.33%
- B. 34.33%
- C. 50% ✓
- D. 51%

Q71

Two taps can fill a cistern in 3 hours and 49 hours, respectively. A third tap can empty the filled cistern in 49 hours. How long (in hours) will it take to fill two-third of the empty cistern if all of them are opened together?

- A. 8
- B. 4
- C. 2 ✓
- D. 6

Q72

The sum of two numbers is 64 and their L.C.M. is 220. The two numbers are:

- A. 42, 22
- B. 37, 27
- C. 49, 15
- D. 44, 20 ✓

Q73

At a health club, 54% of the members are women and 46% of the members are men. If the average age of the men is 45 years and the average age of the women is 50 years, what is the average age (in years) of all the members?

- A. 47.7 ✓
- B. 47.2
- C. 46.8
- D. 46.4

Q74

A shopkeeper marks an article at ₹x and offers a discount of 50% on it. He sells it for ₹252 after charging a VAT of 44% on the discounted price. What is the value of x?

- A. 350 ✓
- B. 375
- C. 800
- D. 400



Q75

Refer to the following number series and answer the question that follows. Counting is to be done from left to right only. (All numbers are single-digit numbers only.)

(Left) 5 1 9 5 3 9 6 3 8 7 9 4 5 3 4 5 3 2 2 1 4 7 3 7 9 4 6
(Right)

How many such odd numbers are there that are immediately preceded by an even number and also immediately followed by an even number?

A. Three

B. Two



C. Four

D. One

Q76

Six people, H, I, J, N, O and P, live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2 and so on, till the topmost floor, which is numbered 6. Only N lives above P. Only J lives below O. H lives immediately below P. How many people live between I and O?

A. None



B. One

C. Three

D. Two

Q77

E, F, G, H, M, N, O and P are sitting around a square table, facing the centre of the table. Some of them are sitting at the corners while some are sitting at the exact centre of the sides.

N sits second to the right of G. Only three people sit between F and M. F is an immediate neighbour of G. Only three people sit between G and H when counted from the left of G. G sits at one of the corners. O sits to the immediate right of N. P is not an immediate neighbour of M. How many people sit between E and O when counted from the left of O?

A. Two

B. Three

C. Four



D. One

Q78

A smartphone is offered with two successive discounts of 20% and 10%. If the marked price is ₹25,000, then what is the final selling price?

A. ₹19,000

B. ₹18,500

C. ₹17,500

D. ₹18,000



Q79

On the diameter AB of a circle with radius 7 units, a triangle ABC is made. The vertex C lies on the circle and the ratio of two adjacent sides at C is 2:3. What is the area of the triangle ABC in square units?

A. $\frac{589}{15}$

B. $\frac{599}{13}$

C. $\frac{588}{13}$



D. $\frac{587}{15}$



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Q80

A rectangular cardboard sheet measures 14 cm in length and 11 cm in width. From each of the two longer sides (each 14 cm), three equilateral triangles of side 2 cm are cut out. From each of the two shorter sides (each 11 cm), a semicircle is cut out, such that none of the triangles or semicircles overlap with one another. If the perimeter of the cardboard after all these cuttings is 70 cm, find the radius (in cm) of each semicircle cut out.

(Use $\pi = \frac{22}{7}$).

A. 3.5



B. 1.75

C. 10.5

D. 7

Q81

$$\frac{\sqrt[3]{2197}}{\sqrt[4]{10000}} \times \frac{5}{39} \times 24 = ?$$

A. 2

B. 6

C. 4



D. 8

Q82

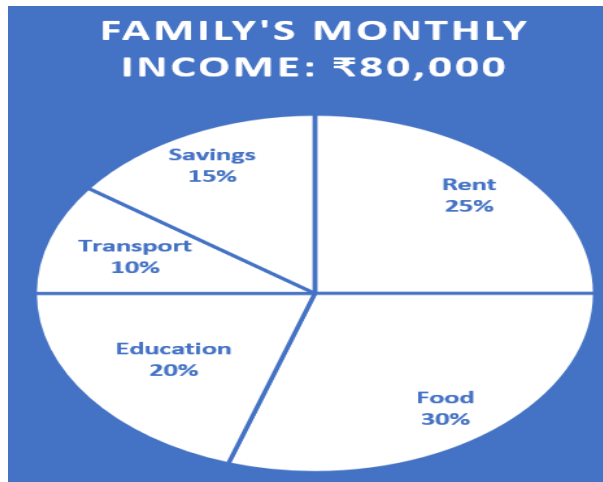
Suppose that an unbiased pair of dice is rolled. Let A denote the event that the same number shows on each die. Let B denote the event that the sum is greater than 7. Find $P(A|B)$ and $P(B|A)$, respectively.

A. $\frac{1}{6}, \frac{1}{5}$ B. $\frac{1}{5}, \frac{1}{2}$ C. $\frac{1}{5}, \frac{1}{12}$ D. $\frac{1}{6}, \frac{1}{12}$ 

Q83

Study the pie chart and answer the question that follows.

The given pie chart shows the monthly expenses of a family, whose income is ₹80,000.



If the family's income increases by 25% next month and they maintain the same percentage distribution, what will be the new amount spent on 'Rent'?

A. ₹30,000

B. ₹27,500

C. ₹25,000



D. ₹22,500

Q84

The simplified value of $\frac{37}{30} \times (62 + 21) + 89$ is

A. $\frac{5741}{30}$



B. $\frac{5731}{30}$

C. $\frac{5743}{30}$

D. $\frac{5737}{30}$



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Q85

Take $\pi = \frac{22}{7}$

A. $\sqrt{\frac{340}{11}}$

B. $\sqrt{\frac{345}{11}}$

C. $\sqrt{\frac{353}{22}}$

D. $\sqrt{\frac{343}{11}}$ ✓

Q86

The value of $\frac{1}{8} + \frac{5}{8} + \frac{2}{16} + \frac{3}{8} - 2$ is

A. $-\frac{3}{4}$ ✓

B. $-\frac{1}{16}$

C. $-\frac{9}{16}$

D. $-\frac{7}{16}$

Q87

In a $\triangle LMN$, $\angle LMN = 67^\circ$ and $\angle LNM = 42^\circ$. If P is the incentre of the $\triangle LMN$, then what is the measure of $\angle MPN$?

A. 125°

B. 125.5° ✓

C. 120°

D. 120.5°



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Q88

Find the area of a plot which is in the shape of a quadrilateral, one of whose diagonals is 20 m and lengths of the perpendiculars from the opposite corners on it are of lengths 12 m and 18 m, respectively.

A. 340 m^2

B. 300 m^2 ✓

C. 298 m^2

D. 324 m^2

Q89

Find the fourth proportional to $\frac{1}{3}$, $\frac{1}{4}$ and $\frac{1}{5}$.

A. $\frac{5}{21}$

B. $\frac{3}{20}$ ✓

C. $\frac{5}{12}$

D. $\frac{4}{15}$

Q90

If x is inversely proportional to y , and $y = 2$ when $x = 7$, find the value of x , when $y = 37$.

A. $\frac{16}{40}$

B. $\frac{14}{38}$

C. $\frac{15}{38}$

D. $\frac{14}{37}$ ✓

Q91

AB and CD are two parallel lines. PQ is a transversal line that intersects AB and CD at L and N, respectively.

If $\angle PLB = (2x)^\circ$, $\angle BLQ = (y + 4x)^\circ$, $\angle DNQ = (x + 2y)^\circ$, find the value of y .

A. 30

B. 60 ✓

C. 15

D. 20



Q92

The sum of 100 observations and the sum of their squares are 400 and 2475, respectively. Later on, three observations, 3, 4 and 5, were found to be incorrect. If the incorrect observations are omitted, then the variance of the remaining observations is:

A. 9



B. 8.05

C. 8.65

D. 8.25

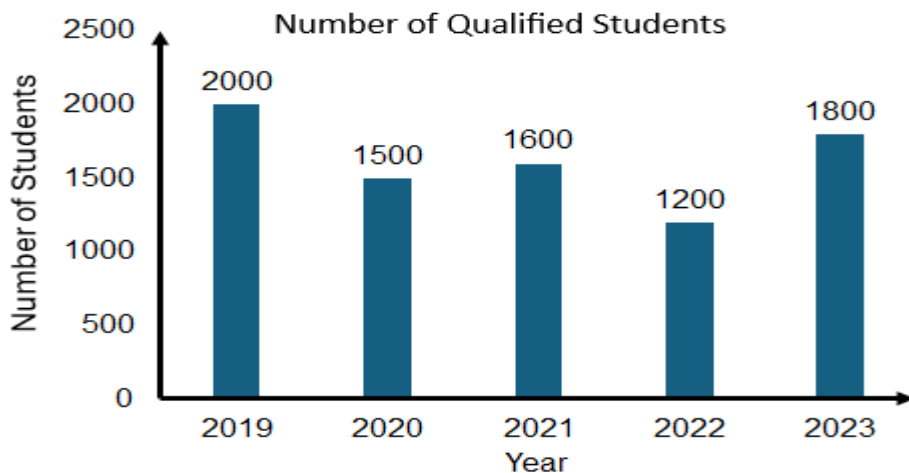
Q93

The simplified value of $55 - [76 - (54 \div 6 - (14 - 24 \div 2) \div 9)]$ is:

A. $-\frac{100}{9}$ B. $-\frac{106}{9}$ C. $-\frac{110}{9}$ D. $-\frac{119}{9}$ 

Q94

The following bar graph shows the number of students who qualified in a competitive examination from 2019 to 2023. Study the bar graph and answer the question that follows.



In which two consecutive years was the percentage increase in the number of qualified students the highest?

A. 2020 - 2021

B. 2022 - 2023



C. 2019 - 2020

D. 2021 - 2022

Q95

Walking at $\frac{2}{5}$ of his normal speed from his home, Bhavesh is 30 minutes late in reaching his office.

The usual time taken by him to cover the distance between his home and his office is:

A. 11 minutes

B. 19 minutes

C. 16 minutes

D. 20 minutes



Q96

The following table gives the total number of employees and the percentage of males and females working in 5 different companies A, B, C, D and E. Study the graph and answer the question.

Company	Total no. of employees	Percentage of males	Percentage of females
A	900	60%	40%
B	600	55%	45%
C	500	75%	25%
D	800	65%	35%
E	700	70%	30%

The total number of females in companies B, C and D is what percentage of the total number of males in companies A and E (up to 2 decimal places)?

A. 65.53%



B. 55.63%

C. 66.43%

D. 60.33%



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Q97

The simplified value of $52 - [71 - (66 \div 6 - (13 - 28 \div 7) \div 5)]$ is:

A. $-\frac{48}{5}$

B. $-\frac{52}{5}$

C. $-\frac{49}{5}$



D. $-\frac{56}{5}$

Q98

The mode of the following data is 3.5. Find the value of x.

Class Intervals	0-1	1-2	2-3	3-4	4-5
Frequency	1	3	x	7	4

A. 4



B. 5

C. 3

D. 6

Q99

The volume (in cm^3) of a rod of diameter 10 cm and length 35 m is:

(Take $\pi = \frac{22}{7}$)

A. 2,75,900

B. 2,74,400

C. 2,75,200

D. 2,75,000



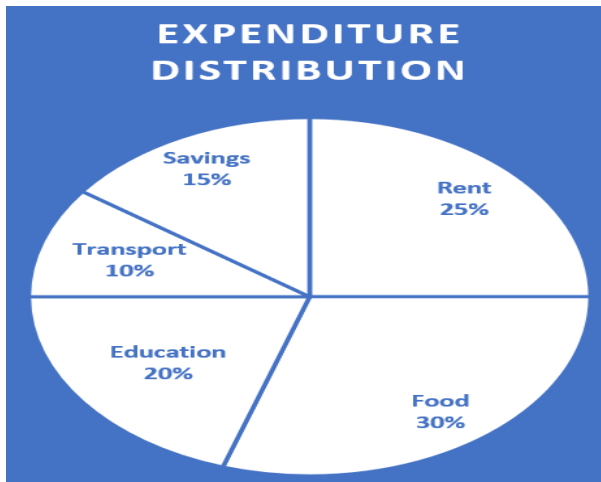
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Q100

Study the pie chart and answer the question that follows.

The given pie chart shows the expenditure distribution of a family's monthly income of ₹80,000.



How much does the family spend on 'Education'?

A. ₹20,000

B. ₹14,000

C. ₹16,000



D. ₹18,000

