



रेल भर्ती बोर्ड / RAILWAY RECRUITMENT BOARD  
सी ई एन - 08/2025 - CEN - 04/2025  
सेक्शन कंट्रोलर की भर्ती / Recruitment of Section Controller



Test Date	12/02/2026
Test Time	9:00 AM - 11:00 AM
Subject	RRB SECTION CONTROLLER CBT 1

\* Note

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.

2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB SECTION CONTROLLER CBT 1

Q.1 In the following series, only one letter-cluster is incorrect. Select the INCORRECT letter-cluster.

FLR BHN XDJ TZF PVA LRX

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

Q.2 A hollow hemispherical steel bowl can contain  $\frac{686\pi}{3}$  cubic units of liquid. The outer radius of the bowl is 9 units. How much steel (in cubic units) was used to make the bowl?

- Ans
- A.  $\frac{772\pi}{3}$
  - B.  $\frac{769\pi}{3}$
  - C.  $\frac{767\pi}{3}$
  - D.  $\frac{770\pi}{3}$

Q.3 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?

- Ans
- A. 645
  - B. 582
  - C. 630
  - D. 679

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Q.4 What will come in the place of the question mark (?) in the following equation, if '+' and '-' are interchanged and 'x' and '÷' are interchanged?

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

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

Q.5 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.

- Ans
- A. 4
  - B. 5
  - C. 4.5
  - D. 5.5

Q.6 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

- Ans
- A. 360.5
  - B. 364
  - C. 362.5
  - D. 361

Q.7 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.

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

Q.8 All 46 students in a class are standing in a row facing north. Jaya is 15<sup>th</sup> from the right end, while Sanjay is 26<sup>th</sup> from the left end. How many people stand between Jaya and Sanjay?

- Ans
- A. 7
  - B. 6
  - C. 4
  - D. 5

Q.9 The least number which when increased by 7 is divisible by each of the numbers 32, 36, 54 and 64 is:

- Ans  A. 1439  
 B. 1632  
 C. 1721  
 D. 1245

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

- Ans  A. 17%  
 B. 12%  
 C. 15%  
 D. 20%

Q.11 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)

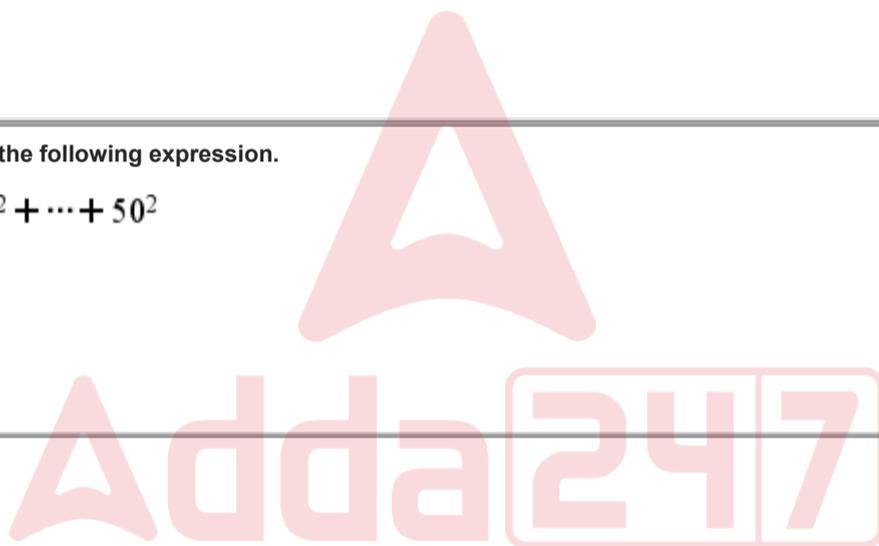
How many such odd numbers are there that are immediately preceded by an odd number and also immediately followed by an odd number?

- Ans  A. Five  
 B. Four  
 C. Six  
 D. Three

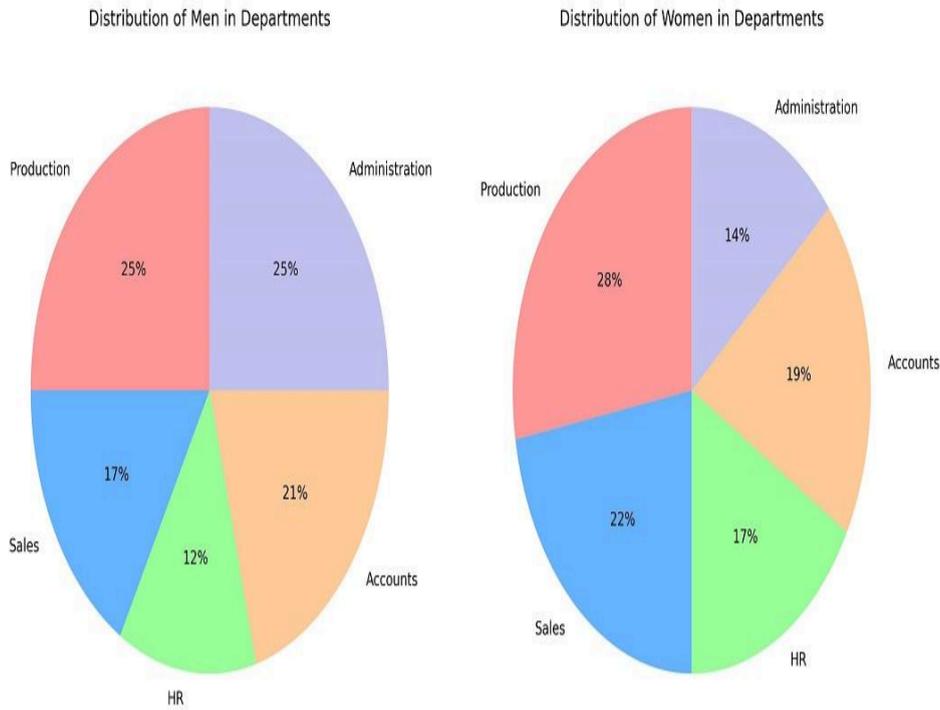
Q.12 Find the value of the following expression.

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

- Ans  A. 9525  
 B. 9625  
 C. 8625  
 D. 10525



**Q.13** The pie charts given below illustrate the distribution of male and female employees across various departments in a company.



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

- Ans**
- A. 402
  - B. 350
  - C. 450
  - D. 500

**Q.14** 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?

- Ans**
- A. 27%
  - B. 21.63%
  - C. 20.63%
  - D. 26%

**Q.15** 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.

- Ans**
- A. 25
  - B. 30
  - C. 22
  - D. 27

**Q.16** 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?

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

Q.17 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.

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

Q.18 Find the mean deviation from the mean for the following data, given that the mean is 9.55. (Round off your answer to two decimal places.)

Size of items $X_i$	4	6	8	10	12	14	16
Frequency $f_i$	2	5	5	3	2	1	4

- Ans  A. 3.12  
 B. 3.32  
 C. 2.42  
 D. 2.46

Q.19 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?

- Ans  A. 627  
 B. 632  
 C. 631  
 D. 630

Q.20 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?

- Ans  A. ₹11404  
 B. ₹11398  
 C. ₹11400  
 D. ₹11397

Q.21 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)

- Ans  A. 20  
 B. 19  
 C. 16  
 D. 18

Q.22 The simplified value of  $\frac{66}{18} \times (82 + 41) + 34$  is

- Ans  A. 485  
 B. 477  
 C. 480  
 D. 491

Q.23 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 : %

- Ans
- A. # = TJV, % = HEL
  - B. # = SRP, % = GFE
  - C. # = RTP, % = DEJ
  - D. # = LQU, % = CHK

Q.24 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?

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

Q.25 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?

- Ans
- A. 9
  - B. 6
  - C. 5
  - D. 3

Q.26 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 - LAFP - PALF  
COIN - OICN - NIOC

- Ans
- A. GOLF - GLOF - FLOG
  - B. HALF - ALHF - FLAH
  - C. DISC - ISDC - ISCD
  - D. BASE - ABSE - EASB

Q.27 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?

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

Q.28 The average of 8 numbers is 59. If each number is increased by 6, what will the new average be?

- Ans
- A. 59
  - B. 8
  - C. 65
  - D. 71

**Q.29** 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.

- Ans**
- A. 64
  - B. 122
  - C. 121
  - D. 136

**Q.30** 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?

- Ans**
- A. 15
  - B. 14
  - C.  $14\frac{1}{2}$
  - D.  $15\frac{1}{2}$

#### Comprehension:

Read the passage and answer the questions.

In 2011, violent riots erupted across London and several English cities. Petrol bombs were hurled, properties vandalised, and shops looted. Despite extensive CCTV footage, most images were unclear, with rioters masking their faces. Gary Collins, an off-duty police officer, was watching the riots on television when he recognised several individuals. Interrupting his holiday, he spent six months meticulously examining CCTV footage and successfully identified 190 offenders—many solely by their eyes. His extraordinary contribution proved invaluable, especially since facial-recognition software identified only one person from 200,000 hours of film. Collins is a super-recogniser, a rare individual capable of recalling faces with exceptional precision. Coined in 2009, the term refers to the 1–2% of people who remember up to 95% of faces they encounter, in contrast to the average person's 20%. Inspired by Collins's achievement, London's Metropolitan Police established the world's first super-recogniser unit in 2015. This small team of six officers has since been responsible for nearly a quarter of all identifications in London, despite the presence of over 30,000 officers. Their success, amplified by Britain's extensive CCTV network, has aided in convicting criminals ranging from petty thieves to murderers. Though rarely sole evidence, their findings often direct investigations, with many culprits pleading guilty upon recognition.

#### SubQuestion No : 31

**Q.31** Which of the following is the most suitable title for the passage?

- Ans**
- A. Convicting the Criminals: How to Recognise Faces
  - B. Artificial Intelligence in Criminal Detection
  - C. Faces Behind the Masks: The Rise of Super-Recognisers
  - D. The Evolution of CCTV Technology

#### Comprehension:

Read the passage and answer the questions.

In 2011, violent riots erupted across London and several English cities. Petrol bombs were hurled, properties vandalised, and shops looted. Despite extensive CCTV footage, most images were unclear, with rioters masking their faces. Gary Collins, an off-duty police officer, was watching the riots on television when he recognised several individuals. Interrupting his holiday, he spent six months meticulously examining CCTV footage and successfully identified 190 offenders—many solely by their eyes. His extraordinary contribution proved invaluable, especially since facial-recognition software identified only one person from 200,000 hours of film. Collins is a super-recogniser, a rare individual capable of recalling faces with exceptional precision. Coined in 2009, the term refers to the 1–2% of people who remember up to 95% of faces they encounter, in contrast to the average person's 20%. Inspired by Collins's achievement, London's Metropolitan Police established the world's first super-recogniser unit in 2015. This small team of six officers has since been responsible for nearly a quarter of all identifications in London, despite the presence of over 30,000 officers. Their success, amplified by Britain's extensive CCTV network, has aided in convicting criminals ranging from petty thieves to murderers. Though rarely sole evidence, their findings often direct investigations, with many culprits pleading guilty upon recognition.

#### SubQuestion No : 32

**Q.32** Identify the tone of the passage.

- Ans**
- A. Factual and explanatory
  - B. Dramatic and emotional
  - C. Persuasive and critical
  - D. Humorous and casual

**Comprehension:**

Read the passage and answer the questions.

In 2011, violent riots erupted across London and several English cities. Petrol bombs were hurled, properties vandalised, and shops looted. Despite extensive CCTV footage, most images were unclear, with rioters masking their faces. Gary Collins, an off-duty police officer, was watching the riots on television when he recognised several individuals. Interrupting his holiday, he spent six months meticulously examining CCTV footage and successfully identified 190 offenders—many solely by their eyes. His extraordinary contribution proved invaluable, especially since facial-recognition software identified only one person from 200,000 hours of film. Collins is a super-recogniser, a rare individual capable of recalling faces with exceptional precision. Coined in 2009, the term refers to the 1–2% of people who remember up to 95% of faces they encounter, in contrast to the average person's 20%. Inspired by Collins's achievement, London's Metropolitan Police established the world's first super-recogniser unit in 2015. This small team of six officers has since been responsible for nearly a quarter of all identifications in London, despite the presence of over 30,000 officers. Their success, amplified by Britain's extensive CCTV network, has aided in convicting criminals ranging from petty thieves to murderers. Though rarely sole evidence, their findings often direct investigations, with many culprits pleading guilty upon recognition.

**SubQuestion No : 33**

**Q.33** What percentage of people are estimated to be super-recognisers?

- Ans**
- A. 20–25%
  - B. 15–18%
  - C. 1–2%
  - D. 5–10%

**Comprehension:**

Read the passage and answer the questions.

In 2011, violent riots erupted across London and several English cities. Petrol bombs were hurled, properties vandalised, and shops looted. Despite extensive CCTV footage, most images were unclear, with rioters masking their faces. Gary Collins, an off-duty police officer, was watching the riots on television when he recognised several individuals. Interrupting his holiday, he spent six months meticulously examining CCTV footage and successfully identified 190 offenders—many solely by their eyes. His extraordinary contribution proved invaluable, especially since facial-recognition software identified only one person from 200,000 hours of film. Collins is a super-recogniser, a rare individual capable of recalling faces with exceptional precision. Coined in 2009, the term refers to the 1–2% of people who remember up to 95% of faces they encounter, in contrast to the average person's 20%. Inspired by Collins's achievement, London's Metropolitan Police established the world's first super-recogniser unit in 2015. This small team of six officers has since been responsible for nearly a quarter of all identifications in London, despite the presence of over 30,000 officers. Their success, amplified by Britain's extensive CCTV network, has aided in convicting criminals ranging from petty thieves to murderers. Though rarely sole evidence, their findings often direct investigations, with many culprits pleading guilty upon recognition.

**SubQuestion No : 34**

**Q.34** What does the passage imply about human versus machine recognition?

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

**Comprehension:**

Read the passage and answer the questions.

In 2011, violent riots erupted across London and several English cities. Petrol bombs were hurled, properties vandalised, and shops looted. Despite extensive CCTV footage, most images were unclear, with rioters masking their faces. Gary Collins, an off-duty police officer, was watching the riots on television when he recognised several individuals. Interrupting his holiday, he spent six months meticulously examining CCTV footage and successfully identified 190 offenders—many solely by their eyes. His extraordinary contribution proved invaluable, especially since facial-recognition software identified only one person from 200,000 hours of film. Collins is a super-recogniser, a rare individual capable of recalling faces with exceptional precision. Coined in 2009, the term refers to the 1–2% of people who remember up to 95% of faces they encounter, in contrast to the average person's 20%. Inspired by Collins's achievement, London's Metropolitan Police established the world's first super-recogniser unit in 2015. This small team of six officers has since been responsible for nearly a quarter of all identifications in London, despite the presence of over 30,000 officers. Their success, amplified by Britain's extensive CCTV network, has aided in convicting criminals ranging from petty thieves to murderers. Though rarely sole evidence, their findings often direct investigations, with many culprits pleading guilty upon recognition.

**SubQuestion No : 35**

**Q.35** The phrase “exceptional precision” most nearly means \_\_\_\_\_.

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

Q.36 Find the median of all the odd numbers between 520 and 550.

- Ans
- A. 537
  - B. 535
  - C. 533
  - D. 531

Q.37 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?

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

Q.38 The sum of two positive numbers is 76 and their product is 1408. The positive difference between them is:

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

Q.39 Find the probability that a randomly chosen number from the first 80 natural numbers is either a perfect square or divisible by 7.

- Ans
- A.  $\frac{9}{37}$
  - B.  $\frac{7}{40}$
  - C.  $\frac{5}{42}$
  - D.  $\frac{9}{40}$

Q.40 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?

- Ans
- A. 5
  - B. 3
  - C. 2
  - D. 4

Q.41 The mode of the following data is 8. Find the value of f.

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

- Ans  A. 19  
 B. 15  
 C. 21  
 D. 16

Q.42 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.

- Ans  A. 2,300  
 B. 2,304  
 C. 2,306  
 D. 2,293

Q.43 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

- Ans  A. 7 - 20 - 14 - 6  
 B. 8 - 21 - 15 - 23  
 C. 9 - 22 - 16 - 25  
 D. 4 - 17 - 23 - 31

Q.44 What should come in place of the question mark (?) in the given series?

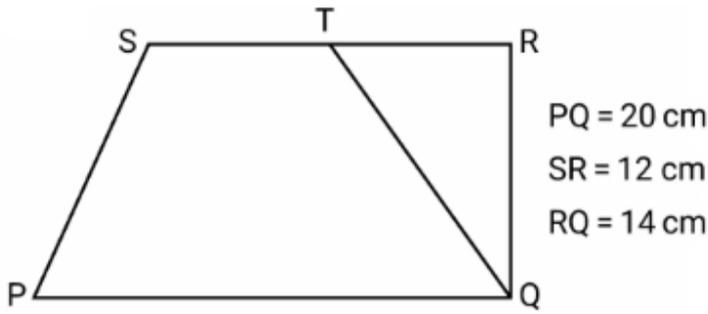
451 450 460 458 470 467 481 ?

- Ans  A. 479  
 B. 478  
 C. 476  
 D. 477

Q.45 The value of  $\frac{2}{8} + \frac{4}{8} + \frac{5}{16} + \frac{2}{8} - 4$  is

- Ans  A.  $-\frac{53}{16}$   
 B.  $-\frac{45}{16}$   
 C.  $-\frac{33}{16}$   
 D.  $-\frac{43}{16}$

Q.46 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  $\text{cm}^2$ ).



- Ans  A. 182  
 B. 204  
 C. 220  
 D. 198

Q.47 Find the area of the triangle whose sides are in the ratio of 7:4:8 with a perimeter of 38 cm.

- Ans  A.  $\sqrt{2135} \text{ cm}^2$   
 B.  $\sqrt{3135} \text{ cm}^2$   
 C.  $60 \text{ cm}^2$   
 D.  $55 \text{ cm}^2$

Q.48 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.)

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

Q.49 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?

- Ans  A. 478  
 B. 479  
 C. 482  
 D. 480

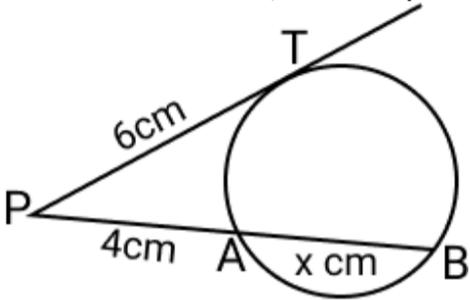
Q.50 In a cloth store, 10 varieties of sarees are arranged on two parallel racks. Rack 1 is facing towards the South and it has the following variety of sarees: A, B, C, D and E. Rack 2 is facing towards the North and it has the following variety of sarees: F, G, H, I and J. Thus, each saree in Rack 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?

- Ans  A. B  
 B. E  
 C. D  
 D. A

Q.51 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.)

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

Q.52 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:



- Ans
- A. 4
  - B. 3
  - C. 5
  - D. 6

Q.53 In the following series, only one letter-cluster is incorrect. Select the INCORRECT letter-cluster.

YEK UAG QWC MSY IOV EKQ

- Ans
- A. IOV
  - B. MSY
  - C. QWC
  - D. EKQ

Q.54 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?

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

Q.55 The area of the base of a right circular cone is  $2464 \text{ cm}^2$  and its height is 45 cm. What is the curved surface area of the cone?  
(Use  $\pi = 22/7$ )

- Ans
- A. 5058  $\text{cm}^2$
  - B. 4224  $\text{cm}^2$
  - C. 3646  $\text{cm}^2$
  - D. 4664  $\text{cm}^2$

Q.56 What will come in place of the question mark (?) in the following equation, if '+' and '-' are interchanged and 'x' and '÷' are interchanged?

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

- Ans
- A. 203
  - B. 195
  - C. 191
  - D. 197

**Q.57** If the perimeter of a square and rectangle are 40 cm each and the difference in their areas is  $4 \text{ cm}^2$ , find the difference between the length and breadth of the rectangle (in cm).

- Ans**
- A. 4
  - B. 2
  - C. 8
  - D. 6

**Comprehension:**

Read the given passage and answer the questions that follow.

We are aware that adolescence brings striking physical changes, but profound neurological transformations also occur. To understand them, we must first grasp the brain's composition. The brain contains about 100 billion neurons—nerve cells that communicate through intricate networks. Each neuron transmits electrical impulses along an axon, which then leap across minute synapses to the dendrites of another neuron, forming a vast circuit of communication. Although infants possess nearly all their neurons at birth, they have few connections, limiting their abilities. Rapid synaptic growth in early childhood enables skills such as walking and speaking. Contrary to earlier beliefs, brain development continues throughout life, with adolescence marking the most intense period of restructuring. During puberty, neural connections proliferate before undergoing "pruning," much like trimming a plant to promote healthy growth. Frequently used connections strengthen, while unused ones fade, illustrating why repetition enhances proficiency—validating the adage practice makes perfect. Thus, teenagers actively sculpt their own neural architecture through chosen activities, from mastering instruments to acquiring languages. Interestingly, the frontal cortex—the region governing judgment, self-control, and reasoning—matures last. Until then, adolescents rely heavily on the brain's emotional centre for decision-making. Hence, impulsive or risk-prone teenage behaviour, often attributed to hormones, may stem more from neurological development than from mood alone.

**SubQuestion No : 58**

**Q.58** Identify the most appropriate title for the passage.

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

**Comprehension:**

Read the given passage and answer the questions that follow.

We are aware that adolescence brings striking physical changes, but profound neurological transformations also occur. To understand them, we must first grasp the brain's composition. The brain contains about 100 billion neurons—nerve cells that communicate through intricate networks. Each neuron transmits electrical impulses along an axon, which then leap across minute synapses to the dendrites of another neuron, forming a vast circuit of communication. Although infants possess nearly all their neurons at birth, they have few connections, limiting their abilities. Rapid synaptic growth in early childhood enables skills such as walking and speaking. Contrary to earlier beliefs, brain development continues throughout life, with adolescence marking the most intense period of restructuring. During puberty, neural connections proliferate before undergoing "pruning," much like trimming a plant to promote healthy growth. Frequently used connections strengthen, while unused ones fade, illustrating why repetition enhances proficiency—validating the adage practice makes perfect. Thus, teenagers actively sculpt their own neural architecture through chosen activities, from mastering instruments to acquiring languages. Interestingly, the frontal cortex—the region governing judgment, self-control, and reasoning—matures last. Until then, adolescents rely heavily on the brain's emotional centre for decision-making. Hence, impulsive or risk-prone teenage behaviour, often attributed to hormones, may stem more from neurological development than from mood alone.

**SubQuestion No : 59**

**Q.59** The tone of the passage can best be described as \_\_\_\_\_.

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

**Comprehension:**

Read the given passage and answer the questions that follow.

We are aware that adolescence brings striking physical changes, but profound neurological transformations also occur. To understand them, we must first grasp the brain's composition. The brain contains about 100 billion neurons—nerve cells that communicate through intricate networks. Each neuron transmits electrical impulses along an axon, which then leap across minute synapses to the dendrites of another neuron, forming a vast circuit of communication. Although infants possess nearly all their neurons at birth, they have few connections, limiting their abilities. Rapid synaptic growth in early childhood enables skills such as walking and speaking. Contrary to earlier beliefs, brain development continues throughout life, with adolescence marking the most intense period of restructuring. During puberty, neural connections proliferate before undergoing "pruning," much like trimming a plant to promote healthy growth. Frequently used connections strengthen, while unused ones fade, illustrating why repetition enhances proficiency—validating the adage practice makes perfect. Thus, teenagers actively sculpt their own neural architecture through chosen activities, from mastering instruments to acquiring languages. Interestingly, the frontal cortex—the region governing judgment, self-control, and reasoning—matures last. Until then, adolescents rely heavily on the brain's emotional centre for decision-making. Hence, impulsive or risk-prone teenage behaviour, often attributed to hormones, may stem more from neurological development than from mood alone.

**SubQuestion No : 60**

**Q.60** According to the passage, which part of the brain matures last?

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

**Comprehension:**

Read the given passage and answer the questions that follow.

We are aware that adolescence brings striking physical changes, but profound neurological transformations also occur. To understand them, we must first grasp the brain's composition. The brain contains about 100 billion neurons—nerve cells that communicate through intricate networks. Each neuron transmits electrical impulses along an axon, which then leap across minute synapses to the dendrites of another neuron, forming a vast circuit of communication. Although infants possess nearly all their neurons at birth, they have few connections, limiting their abilities. Rapid synaptic growth in early childhood enables skills such as walking and speaking. Contrary to earlier beliefs, brain development continues throughout life, with adolescence marking the most intense period of restructuring. During puberty, neural connections proliferate before undergoing "pruning," much like trimming a plant to promote healthy growth. Frequently used connections strengthen, while unused ones fade, illustrating why repetition enhances proficiency—validating the adage practice makes perfect. Thus, teenagers actively sculpt their own neural architecture through chosen activities, from mastering instruments to acquiring languages. Interestingly, the frontal cortex—the region governing judgment, self-control, and reasoning—matures last. Until then, adolescents rely heavily on the brain's emotional centre for decision-making. Hence, impulsive or risk-prone teenage behaviour, often attributed to hormones, may stem more from neurological development than from mood alone.

**SubQuestion No : 61**

**Q.61** Which statement best captures the author's viewpoint?

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

**Comprehension:**

Read the given passage and answer the questions that follow.

We are aware that adolescence brings striking physical changes, but profound neurological transformations also occur. To understand them, we must first grasp the brain's composition. The brain contains about 100 billion neurons—nerve cells that communicate through intricate networks. Each neuron transmits electrical impulses along an axon, which then leap across minute synapses to the dendrites of another neuron, forming a vast circuit of communication. Although infants possess nearly all their neurons at birth, they have few connections, limiting their abilities. Rapid synaptic growth in early childhood enables skills such as walking and speaking. Contrary to earlier beliefs, brain development continues throughout life, with adolescence marking the most intense period of restructuring. During puberty, neural connections proliferate before undergoing "pruning," much like trimming a plant to promote healthy growth. Frequently used connections strengthen, while unused ones fade, illustrating why repetition enhances proficiency—validating the adage practice makes perfect. Thus, teenagers actively sculpt their own neural architecture through chosen activities, from mastering instruments to acquiring languages. Interestingly, the frontal cortex—the region governing judgment, self-control, and reasoning—matures last. Until then, adolescents rely heavily on the brain's emotional centre for decision-making. Hence, impulsive or risk-prone teenage behaviour, often attributed to hormones, may stem more from neurological development than from mood alone.

**SubQuestion No : 62**

**Q.62** The word 'pruning' as used in the text suggests \_\_\_\_\_.

- Ans**
- A. neglecting connections
  - B. planting new ideas
  - C. cutting down to enhance growth
  - D. adding new structures

**Q.63** 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 : %

- Ans**
- A. # = MHD, % = WRN
  - B. # = IOD, % = WNB
  - C. # = OPD, % = WVN
  - D. # = MNM, % = AZN

**Q.64** 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.)

- Ans**
- A. MQ - PT
  - B. LO - NL
  - C. IM - LP
  - D. EI - HL

**Q.65** 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?

- Ans**
- A. 8
  - B. 16
  - C. 27
  - D. 6

#### Comprehension:

Read the given passage and answer the questions that follow.

Vincent van Gogh was a Dutch painter, generally considered the greatest after Rembrandt van Rijn, and one of the greatest of the Post-Impressionists. The striking colour, emphatic brushwork, and contoured forms of his work powerfully influenced the current of Expressionism in modern art. Van Gogh's art became astoundingly popular after his death when his work sold for record-breaking sums at auctions around the world and was featured in blockbuster touring exhibitions. Van Gogh, the eldest of six children of a Protestant pastor, was born and reared in a small village in the Brabant region of the southern Netherlands. He was a quiet, self-contained youth, spending his free time wandering the countryside to observe nature. At 16, he was apprenticed to The Hague branch of the art dealers Goupil and Co., of which his uncle was a partner. Van Gogh worked for Goupil in London and in Paris. Daily contact with works of art aroused his artistic sensibility, and he soon formed a taste for Rembrandt, Frans Hals, and other Dutch masters, although his preference was for two contemporary French painters, Jean-François Millet and Camille Corot, whose influence was to last throughout his life. Van Gogh disliked art dealing. Moreover, his approach to life darkened when his love was rejected by a London woman in 1874. His burning desire for human affection thwarted, he became increasingly solitary. He worked as a language teacher and lay preacher in England and, in 1877, worked for a bookseller in Dordrecht, Netherlands.

#### SubQuestion No : 66

**Q.66** What is the central theme of the passage?

- Ans**
- A. The role of French painters in Dutch culture
  - B. The formative influences and later recognition of Van Gogh's art
  - C. The tragic and melancholic love life of Vincent Van Gogh
  - D. The religious background of Dutch painters

**Comprehension:**

Read the given passage and answer the questions that follow.

Vincent van Gogh was a Dutch painter, generally considered the greatest after Rembrandt van Rijn, and one of the greatest of the Post-Impressionists. The striking colour, emphatic brushwork, and contoured forms of his work powerfully influenced the current of Expressionism in modern art. Van Gogh's art became astoundingly popular after his death when his work sold for record-breaking sums at auctions around the world and was featured in blockbuster touring exhibitions. Van Gogh, the eldest of six children of a Protestant pastor, was born and reared in a small village in the Brabant region of the southern Netherlands. He was a quiet, self-contained youth, spending his free time wandering the countryside to observe nature. At 16, he was apprenticed to The Hague branch of the art dealers Goupil and Co., of which his uncle was a partner. Van Gogh worked for Goupil in London and in Paris. Daily contact with works of art aroused his artistic sensibility, and he soon formed a taste for Rembrandt, Frans Hals, and other Dutch masters, although his preference was for two contemporary French painters, Jean-François Millet and Camille Corot, whose influence was to last throughout his life. Van Gogh disliked art dealing. Moreover, his approach to life darkened when his love was rejected by a London woman in 1874. His burning desire for human affection thwarted, he became increasingly solitary. He worked as a language teacher and lay preacher in England and, in 1877, worked for a bookseller in Dordrecht, Netherlands.

**SubQuestion No : 67**

**Q.67** What is the ANTONYM of 'solitary' as used in the passage?

- Ans**
- A. Reserved
  - B. Lonely
  - C. Thoughtful
  - D. Sociable

**Comprehension:**

Read the given passage and answer the questions that follow.

Vincent van Gogh was a Dutch painter, generally considered the greatest after Rembrandt van Rijn, and one of the greatest of the Post-Impressionists. The striking colour, emphatic brushwork, and contoured forms of his work powerfully influenced the current of Expressionism in modern art. Van Gogh's art became astoundingly popular after his death when his work sold for record-breaking sums at auctions around the world and was featured in blockbuster touring exhibitions. Van Gogh, the eldest of six children of a Protestant pastor, was born and reared in a small village in the Brabant region of the southern Netherlands. He was a quiet, self-contained youth, spending his free time wandering the countryside to observe nature. At 16, he was apprenticed to The Hague branch of the art dealers Goupil and Co., of which his uncle was a partner. Van Gogh worked for Goupil in London and in Paris. Daily contact with works of art aroused his artistic sensibility, and he soon formed a taste for Rembrandt, Frans Hals, and other Dutch masters, although his preference was for two contemporary French painters, Jean-François Millet and Camille Corot, whose influence was to last throughout his life. Van Gogh disliked art dealing. Moreover, his approach to life darkened when his love was rejected by a London woman in 1874. His burning desire for human affection thwarted, he became increasingly solitary. He worked as a language teacher and lay preacher in England and, in 1877, worked for a bookseller in Dordrecht, Netherlands.

**SubQuestion No : 68**

**Q.68** Which of the following is a fact stated in the passage?

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

**Comprehension:**

Read the given passage and answer the questions that follow.

Vincent van Gogh was a Dutch painter, generally considered the greatest after Rembrandt van Rijn, and one of the greatest of the Post-Impressionists. The striking colour, emphatic brushwork, and contoured forms of his work powerfully influenced the current of Expressionism in modern art. Van Gogh's art became astoundingly popular after his death when his work sold for record-breaking sums at auctions around the world and was featured in blockbuster touring exhibitions. Van Gogh, the eldest of six children of a Protestant pastor, was born and reared in a small village in the Brabant region of the southern Netherlands. He was a quiet, self-contained youth, spending his free time wandering the countryside to observe nature. At 16, he was apprenticed to The Hague branch of the art dealers Goupil and Co., of which his uncle was a partner. Van Gogh worked for Goupil in London and in Paris. Daily contact with works of art aroused his artistic sensibility, and he soon formed a taste for Rembrandt, Frans Hals, and other Dutch masters, although his preference was for two contemporary French painters, Jean-François Millet and Camille Corot, whose influence was to last throughout his life. Van Gogh disliked art dealing. Moreover, his approach to life darkened when his love was rejected by a London woman in 1874. His burning desire for human affection thwarted, he became increasingly solitary. He worked as a language teacher and lay preacher in England and, in 1877, worked for a bookseller in Dordrecht, Netherlands.

**SubQuestion No : 69**

**Q.69** Which title best captures the essence of the passage?

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

**Comprehension:**

Read the given passage and answer the questions that follow.

Vincent van Gogh was a Dutch painter, generally considered the greatest after Rembrandt van Rijn, and one of the greatest of the Post-Impressionists. The striking colour, emphatic brushwork, and contoured forms of his work powerfully influenced the current of Expressionism in modern art. Van Gogh's art became astoundingly popular after his death when his work sold for record-breaking sums at auctions around the world and was featured in blockbuster touring exhibitions. Van Gogh, the eldest of six children of a Protestant pastor, was born and reared in a small village in the Brabant region of the southern Netherlands. He was a quiet, self-contained youth, spending his free time wandering the countryside to observe nature. At 16, he was apprenticed to The Hague branch of the art dealers Goupil and Co., of which his uncle was a partner. Van Gogh worked for Goupil in London and in Paris. Daily contact with works of art aroused his artistic sensibility, and he soon formed a taste for Rembrandt, Frans Hals, and other Dutch masters, although his preference was for two contemporary French painters, Jean-François Millet and Camille Corot, whose influence was to last throughout his life. Van Gogh disliked art dealing. Moreover, his approach to life darkened when his love was rejected by a London woman in 1874. His burning desire for human affection thwarted, he became increasingly solitary. He worked as a language teacher and lay preacher in England and, in 1877, worked for a bookseller in Dordrecht, Netherlands.

**SubQuestion No : 70**

**Q.70** What best describes the tone of the passage?

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

**Q.71** Fourth proportion to 12, 18 and 6 is same as the third proportion to 4 and k. What is the positive value of k?

- Ans
- A. 6
  - B. 7
  - C. 8
  - D. 4

**Q.72** If a data set has a median of 92 and a mean of 84, what is the value of the mode?

- Ans
- A. 96
  - B. 108
  - C. 98
  - D. 102

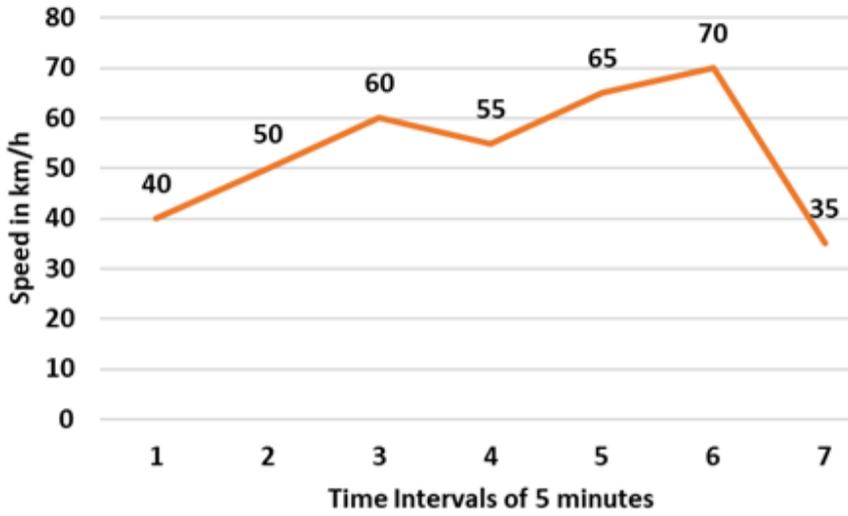
**Q.73** Find the value of  $y$ , satisfying  $23 \times 7 \times 616 \div \sqrt{3136} = y + 506$

- Ans
- A. 1256
  - B. 1271
  - C. 1275
  - D. 1265

**Q.74** 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?

- Ans
- A. 26
  - B. 36
  - C. 20
  - D. 33

Q.75 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?



- Ans
- A. 10
  - B. 20
  - C. 5
  - D. 15

Q.76 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?

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

Q.77 Find the value of m for which it satisfies

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

- Ans
- A.  $\frac{1}{8}$
  - B.  $-\frac{1}{8}$
  - C.  $\frac{7}{8}$
  - D.  $\frac{5}{8}$

Q.78 Two dice are thrown simultaneously. The probability that the sum of the numbers on the faces turned up exceeds 7 is:

Ans

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

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

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

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

Q.79 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.

Ans  A. Neither conclusion (I) nor (II) follows.

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

C. Only conclusion (II) follows.

D. Only conclusion (I) follows.

Q.80 By how much is 30% of 65 greater than 35% of 30?

Ans  A. 6

B. 9

C. 4

D. 11

Q.81 Calculate the volume of a cube whose side length is 23 millimetres.

Ans  A. 12,157 mm<sup>3</sup>

B. 12,167 mm<sup>3</sup>

C. 12,147 mm<sup>3</sup>

D. 12,177 mm<sup>3</sup>

Q.82 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

Ans  A. 122

B. 124

C. 121

D. 123

Q.83 A cone is cut parallel to its base, forming a frustum. If the radii of the two circular bases of the frustum are 5 cm and 3 cm, and the height of the frustum is 12 cm, find the volume of the original cone. (Take  $\pi = \frac{22}{7}$ )

- Ans
- A.  $685\frac{6}{7}\text{ cm}^3$
  - B.  $685\frac{5}{7}\text{ cm}^3$
  - C.  $785\frac{5}{7}\text{ cm}^3$
  - D.  $785\frac{6}{7}\text{ cm}^3$

Q.84 If  $x-1$  is the mean proportion between  $x-2$  and  $x-8$ , then find the value of  $x$ .

- Ans
- A.  $\frac{5}{4}$
  - B.  $\frac{5}{3}$
  - C.  $\frac{15}{7}$
  - D.  $\frac{15}{8}$

Q.85 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  $\text{cm}^3$ ).

- Ans
- A. 5,52,960
  - B. 2,14,230
  - C. 1,61,440
  - D. 3,68,640

Q.86 The simplified value of  $\frac{(38^6 \times 2^4 \times 96^{16})}{(38^5 \times 2^3 \times 96^{15})}$  is

- Ans
- A. 7301
  - B. 7296
  - C. 7290
  - D. 7295

Q.87 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?

- Ans
- A. 64%
  - B. 65%
  - C. 60%
  - D. 62%

Q.88 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?

- Ans
- A. 16,634
  - B. 16,628
  - C. 16,637
  - D. 16,632

Q.89 The volume of a cylinder having height 49 cm and radius 17 cm is \_\_\_\_\_.

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

- Ans
- A. 44426 cm<sup>3</sup>
  - B. 44506 cm<sup>3</sup>
  - C. 44492 cm<sup>3</sup>
  - D. 44580 cm<sup>3</sup>

Q.90 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:

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

Q.91 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

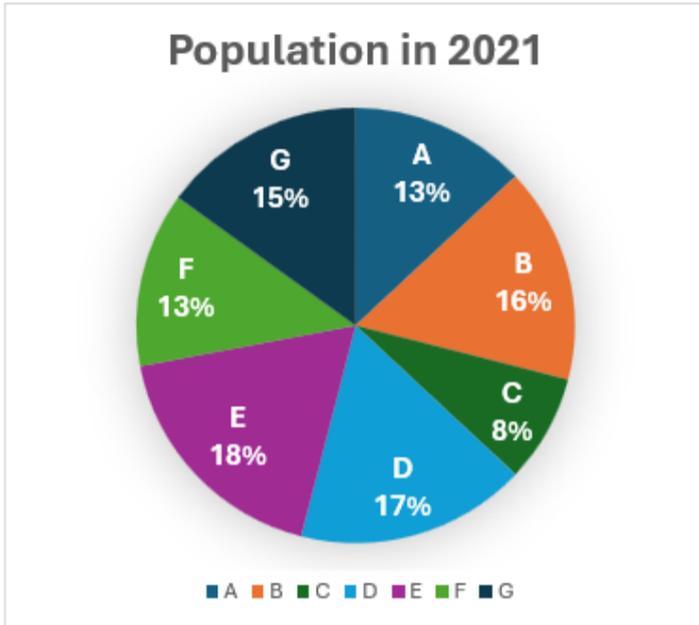
In which year is the total production of A and D together equal to the total production of C and E together?

- Ans
- A. 1999
  - B. 2001
  - C. 2000
  - D. 1998

Q.92 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 19<sup>th</sup> number from the beginning is excluded, then what is the average of the remaining numbers?

- Ans
- A. 33.689
  - B. 25.25
  - C. 27.1
  - D. 29.475

Q.93 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:

- Ans
- A. 19,450
  - B. 18,450
  - C. 18,540
  - D. 19,540

Q.94 What will come in place of the question mark (?) in the following equation if '+' and '-' are interchanged and 'x' and '÷' are interchanged?  
 $15 \div 2 - 63 \times 7 + 11 = ?$

- Ans
- A. 36
  - B. 25
  - C. 28
  - D. 30

Q.95 If 135 kg of corn feeds 45 horses for 8 days, for how long will the same quantity of corn feed 24 horses?

- Ans
- A. 15 days
  - B. 13 days
  - C. 17 days
  - D. 18 days

Q.96 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'?

- Ans
- A. Mother's mother
  - B. Mother
  - C. Wife
  - D. Sister

Q.97 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.

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

Q.98 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?

- Ans  A. 5  
 B. 7  
 C. 12  
 D. 6

Q.99  $\triangle ABC$  and  $\triangle ADE$  are such that point D lies on side BC. If  $AB = AD$ ,  $AC = AE$  and  $\angle BAD = \angle EAC$ , then which of the following relations is correct?

- Ans  A.  $BC < DE$   
 B.  $BC > DE$   
 C.  $BC = DE$   
 D.  $BC = BA$

Q.100 The fourth proportional of the numbers  $x$ ,  $(x+2)$  and  $3x$  is 33. Find the second proportional;  $x$  is a natural number.

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