

40. If $x+y+z=30$, $x^2+y^2=125$ and $xy=50$, then what is the value of $\frac{xy}{z}$? 40
100
3.26

- A) 3.13
- ✓ B) 3.33
- C) 3.43
- D) 3.23

$$\boxed{10^2 + 5^2 = 125}$$

$$\frac{10 \times 5}{15} = \frac{50}{15} = 3.33$$

41. ABC is a three-digit number in which each digit indicates different digit and A is greater than B. The difference between ABC and another three digit number CBA is always divisible by:

- A) 111
- B) 101
- C) 99
- D) 37

$A > B$

$$7a2 - a21 = 6a1$$

$$a211 - 12a$$

42. $\frac{P}{Q}$ is a proper fraction. Which among the following is largest? -129

- A) $1 - \frac{P}{Q}$
- B) $\frac{P^2}{Q^2}$
- C) $\frac{Q}{P}$
- D) $\left(\frac{P}{Q}\right)^3$

43. Certain number of students attended an NCC camp. The camp master decided to arrange the students into equal number of rows and columns. After arranging them into a maximum possible square shape 12 students are left. The master needed 9 more students to increase that square size by one unit. Find the number of students who attended the camp?

- A) 100
- B) 112
- C) 132
- D) 121

44. The total cost of 2 Pens, 3 Pencils and 4 Erasers is Rs. 34. The total cost of 5 Pens, 7 Pencils and 9 Erasers is Rs. 80. What is the total cost of 1 Pen, 1 Pencil and 1 Eraser?

- A) Rs. 16
- B) Rs. 15
- C) Rs. 12
- D) Rs. 18

$$2P + 3Pencil + 4E = 34$$

$$5P + 7P + 9E = 80$$

45. A man having 'n' hundred-rupee notes, 'n' ten-rupee notes and 'n' one-rupee coins. The total amount he has is sum of first 36 even numbers. What is the value of 'n'?

- A) 36
- B) 37
- C) 111
- D) 12

$$100n + 10n + n = 36 \times 36$$

$$111n = 1296$$

$$n = 12$$

46. The population of a town decreases by 20% every year. If the present population is 1,92,000, what was the population two years ago?

- A) 1,33,334
- B) 3,00,000
- C) 1,22,880
- D) 2,76,480

47. Mr. Aakash is having Rs. 68,200. He invested a part of the amount at 20% compound interest for four years, and the remaining amount at same rate for seven years at compound interest such that the total amounts received at the end of the term from each investment to be same.

What is the amount invested for four years?

- A) 21,600
- B) 31,500
- C) 43,200
- D) 12,500

48. Rs. 60,000 invested at $16\frac{2}{3}\%$ per annum at simple interest. Find the amount received at the end of 4.5 years?

- A) Rs. 45,000
- B) Rs. 4,500
- C) Rs. 36,000
- D) Rs. 48,000

Handwritten calculations for Q48:

$16\frac{2}{3}\%$

$60000 \times 16\frac{2}{3} \times 4.5 = 96000$

$60000 + 96000 = 156000$

49. How many six-character passwords can be generated, using the symbols @, #, \$, & and the digits 1, 2, 3, 4, 5 and 6, such that first two characters are symbols and the next four characters are digits?

- A) 5400
- B) 6000
- C) 2400
- D) 4800

Handwritten symbols: @ # \$

50. Among first 100 positive integers one number is selected at random. What is the probability that the number selected is a square number as well as cube number?

- A) $\frac{1}{100}$
- B) $\frac{1}{50}$
- C) $\frac{3}{100}$
- D) $\frac{3}{50}$

Handwritten calculations for Q50:

$2 \times 2 \times 2 = 8$

$3 \times 3 \times 3 = 27$

$4 \times 4 \times 4 = 64$

$5 \times 5 \times 5 = 125$

51. Which among the following is co-prime?

- A) (91, 13) ✓
- B) (63, 119)
- C) (21, 25)
- D) (51, 85)

52. Find the number of factors of $6^5 \times 15^4 \times 10^2$?

- A) 90
- B) 350
- C) 560
- D) 640

53. What is the greatest number which divides 1094, 1249 and 1559 and leaves a same remainder in each case?

- A) 310
- B) 322
- C) 155
- D) 31

54. LCM and HCF of two numbers are 630 and 18 respectively. If one among the two numbers is 126 find the other number?

- A) 180
- B) 90
- C) 315
- D) 36

55. The ratio of the ages of Mr. A and Mr. B is 5: 7. After 8 years, the age of Mr. A is 4 years less than the age of Mr. B. Find the present age of Mr. A?

- A) 15 years
- B) 10 years
- C) 8 years
- D) 12 years

56. If 51% of A = 68% of B = 85% of C, then find A : B : C?

- A) 3 : 4 : 5
- B) 5 : 4 : 3
- C) 20 : 15 : 12
- D) 12 : 15 : 20

57. The selling price of two chairs are equal. One chair sold at 12% profit. And another chair sold at 20% loss. If the total cost price of the two chairs is Rs. 4,800. Find the cost price of the chair sold at 12% profit?

- A) Rs. 2,000
- B) Rs. 2,500
- C) Rs. 3,500
- D) Rs. 4,500

Handwritten calculations for questions 52-57:

- For Q52: $6^5 \times 15^4 \times 10^2 = 2^5 \times 3^5 \times (3 \times 5)^4 \times (2 \times 5)^2 = 2^7 \times 3^9 \times 5^6$. Number of factors = $(7+1)(9+1)(6+1) = 8 \times 10 \times 7 = 560$.
- For Q53: Divisors of 1094, 1249, 1559 are 2, 547, 1094, 1249, 1559, 3118, 1249, 1559, 3118, 6236, 1559, 3118, 6236, 1249, 1559, 3118, 6236. HCF = 155.
- For Q54: $\frac{LCM}{HCF} = \frac{630}{18} = 35$. Other number = $\frac{630}{35} = 18$.
- For Q55: $\frac{A}{B} = \frac{5}{7}$. $A + 8 = B - 4$. $5x + 8 = 7x - 4$. $2x = 12$. $x = 6$. Present age of Mr. A = 30.
- For Q56: $0.51A = 0.68B = 0.85C = k$. $A = \frac{k}{0.51}$, $B = \frac{k}{0.68}$, $C = \frac{k}{0.85}$. Ratio A:B:C = 100:45:50 = 20:9:10.
- For Q57: Let cost price be x. Selling price = $1.12x$ and $0.80x$. $1.12x + 0.80x = 4800$. $1.92x = 4800$. $x = 2500$.

58. The average marks of 12 students in an examination is 45 marks, including the marks of three students, the average marks of total 15 students become 47 marks. What is the average mark of the three new students?

Handwritten calculations for Q58:
 $12 \times 45 = 540$
 $15 \times 47 = 705$
 $705 - 540 = 165$
 $165 / 3 = 55$
 Options: A) 55, B) 34, C) 64, D) 45

Handwritten calculation for Q59:
 $45 \times 3 = 135$

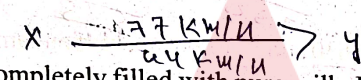
59. Kumar travel from the place X to another place Y at the rate of 77 kmph and he return from the place B to the place A at the same route at the rate of 44 kmph. What is the average speed for his journey?

- Options: A) 56 kmph, B) 60.5 kmph, C) 112 kmph, D) 28 kmph

Handwritten calculation for Q59:
 $55 \times 18 = 990$
 $990 / 18 = 55$

60. A vessel completely filled with pure milk. From the vessel 15 liters are taken out and replaced with water. From the mixture 15 liter are taken out and replaced with water. This process was done one more time. The Ratio of milk to water in the final mixture is 64: 61. What is the capacity of the vessel?

- Options: A) 100 liter, B) 75 liter, C) 84 liter, D) 60 liter



Handwritten calculation for Q60:
 $77 \times 2 = 154$
 $154 / 2.5 = 60.5$

61. A is 3/5 as efficient as B, so that B takes 32 days less than the number of days taken by A to complete that work. In how many days A and B together can complete the work?

- Options: A) 36 days, B) 24 days, C) 30 days, D) 18 days

Handwritten calculation for Q61:
 $10 - 32 = -22$
 $32 \times 2 = 64$

62. Amar divided his total route of journey into three equal distances. He travels each distance at 60kmph, 48kmph and 40kmph respectively. What is his average speed for the whole journey?

- Options: A) 49 kmph, B) 48 kmph, C) 56 kmph, D) 64 kmph

Handwritten calculation for Q62:
 $48 \times 2 = 96$
 $96 / 2 = 48$
 $48 \times 2 = 96$
 $96 / 2 = 48$
 $48 \times 2 = 96$
 $96 / 2 = 48$
 $48 \times 2 = 96$
 $96 / 2 = 48$

63. The length of a rectangle is 3 times of its breadth. The area of the rectangle is 1728 sq.m. What is the length of the rectangle?

- A) 72 m
- B) 120 m
- C) 90 m
- D) 84 m

Handwritten solution for Q63:

Let breadth = x m, then length = $3x$ m.

Area = $3x \times x = 3x^2 = 1728$

$x^2 = \frac{1728}{3} = 576$

$x = \sqrt{576} = 24$

Length = $3 \times 24 = 72$ m

64. A wheel of radius 63cm completes certain distance in 50 revolutions. What is the distance travelled by the wheel?

- A) 96 m
- B) 198 m
- C) 420 m
- D) 210 m

Handwritten solution for Q64:

Distance = $2\pi R \times \text{Revolutions}$

$= 2 \times \pi \times 63 \times 50$

$= 2 \times 3.14 \times 63 \times 50$

$= 19800$ cm

$= 198$ m

65. In how many ways 8 different colours stones can be fixed around a circular bangle?

- A) 2520
- B) 2500
- C) 3200
- D) 1250

Handwritten solution for Q65:

Number of ways = $\frac{8!}{8} = \frac{40320}{8} = 5040$

(Note: The handwritten answer is 3200, which is incorrect based on the standard formula for circular permutations.)

66. The area of the three adjacent faces of a cuboid is 150 sq.cm, 120 sq.cm and 80sq.cm. What is the volume of the cuboid?

- A) 1200 cu.cm
- B) 1400 cu.cm
- C) 1250 cu.cm
- D) 1100 cu.cm

Handwritten solution for Q66:

Let length = l , breadth = b , and height = h .

$lb = 150$

$bh = 120$

$lh = 80$

Multiplying all three: $l^2 b^2 h^2 = 150 \times 120 \times 80 = 1440000$

$l b h = \sqrt{1440000} = 1200$ cu.cm

67. Among first 20 positive integers, one number is selected at random. What is the probability that the number is prime number?

- A) $\frac{1}{7}$
- B) $\frac{2}{7}$
- C) $\frac{2}{5}$
- D) $\frac{1}{5}$

Handwritten solution for Q67:

Prime numbers between 1 and 20: 2, 3, 5, 7, 11, 13, 17, 19

Number of prime numbers = 8

Probability = $\frac{8}{20} = \frac{2}{5}$

68. Number of flowers in a pond doubles in every 12 minutes. In 96 minutes, the whole pond surface covered with flowers. In how many minutes the flowers in pond covers one fourth of the pond surface?

- A) 72 minutes
- B) 48 minutes
- C) 36 minutes
- D) 24 minutes

Handwritten solution for Q68:

12 → 100

24 → 200

36 → 400

48 → 800

60 → 1600

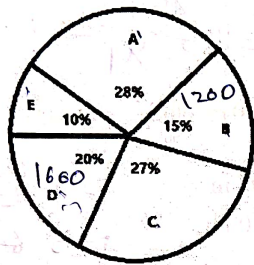
72 → 3200

84 → 6400

96 → 12800

Since the surface is fully covered at 96 minutes (12800 flowers), one-fourth of the surface is covered at 72 minutes (3200 flowers).

69. Consider the following chart and answer the following.
 The given pie chart shows the number of satellites launched by five different countries A, B, C, D, E
 Total number of satellites launched = 8000



Handwritten calculation: $1600 - D$

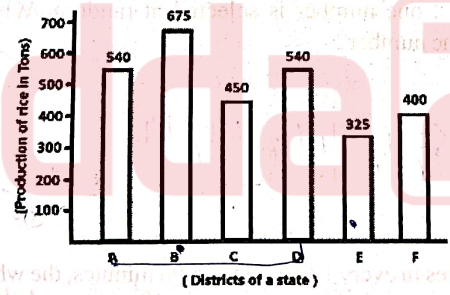
Handwritten calculation: $\frac{1200}{1600} \times 100$

Handwritten calculation: $\frac{1200}{1600} \times 100$

The number of satellites launched by B is what percent of the number of satellites launched by D?

- A) 15
- B) 75
- C) 30
- D) 133.3%

70. Consider the following bar chart and answer the following:
 The production of rice of six districts of a state in a particular year is given:



Handwritten calculation: $\frac{1080}{10} \times 10$

By what percent the total production of rice of the districts A and D together is more than the total production of rice of the districts B and E?

- A) 80%
- B) 18%
- C) 8%
- D) 10%

71. Complete the given series:

3, 9, 5, 15, 11, 33, 29, ?

- A) 25
- B) 87
- C) 83
- D) 77

72. Select the related word/letters/number from the given alternatives.

31 : 37 :: 101 : ?

- A) 104
- B) 108
- C) 103
- D) 107

73. Select the related word/letters/number from the given alternatives.

THREE : EEHRT :: THIRTY :

- A) TYRIHT
- B) HIRTTY
- C) HITTRY
- D) TYTHIR

74. In a certain code, If 'MIRROR' is written as 499969, 'BASKET' is written as 211252 then how will the word 'REVERSE' be written in that code?

- A) 43764
- B) 9545915
- C) 45283
- D) 41253

75. Pointing to a photograph of a woman, Krishna said, "She is the Mother of the husband of the mother of the sister of my son ". How is Krishna related to the woman in the photograph?

- A) Daughter
- B) Daughter-in-law
- C) Wife
- D) Mother

76. From 2010 to 2024, how many years will have the same weekday on January 1st December 31st?

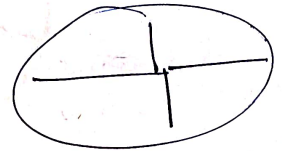
- A) Four
- C) Eleven

77. What is the weekday on 3rd March 1962?
 A) Tuesday
 B) Saturday
 C) Friday
 D) Thursday

Handwritten: 49 (2) 1962

78. Between 8AM to 5PM how many times the minute hand and the hour hand of a clock will be together?
 A) 9
 B) 7
 C) 10
 D) 8

Handwritten: 8-9-10-11-12-1-2-3-4-5



79. What will be the angle between the hands of a clock when time is 5 hour 24 minutes?
 A) 24 degree
 B) 28 degree
 C) 18 degree
 D) 32 degree

Handwritten: 5:24



80. What is the least possible number of cuts needed to make a cube into 720 equal size pieces?
 A) 18 cuts
 B) 72 cuts
 C) 27 cuts
 D) 24 cuts

Handwritten: 720 / 27 = 27

81. How many 1cm cubes are needed to make a cuboid of size 4cm x 7cm x 10cm?
 A) 140
 B) 280
 C) 162
 D) 440

Handwritten: 4 x 7 x 10 = 280

82. If L stands for +, M stands for -, N stands for x, P stands for ÷, then
 36 L 15 P 3 N 4 M 16 = ?
 A) 42
 B) 50
 C) 40
 D) 32

Handwritten: 36 + 15 ÷ 3 x 4 - 16 = 40

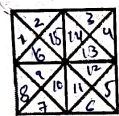
83. Different views of a fair die are given. Based on the views given find the number opposite to 5?



Handwritten notes for question 83:
 5 1 2
 3 4
 6
 3 2 6
 3 4 5

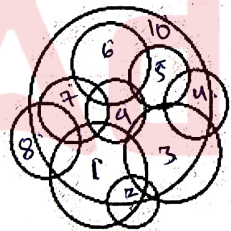
- A) 1
- B) 4
- C) 6
- D) 5

84. How many triangles are there in the given figure?



- A) 36
- B) 40
- C) 32
- D) 44

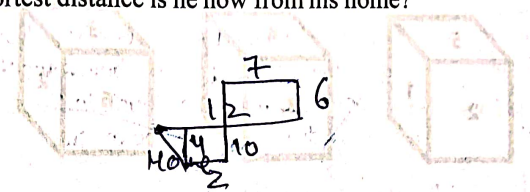
85. What is the total number of circles in the given figure?



- A) 11
- B) 8
- C) 10
- D) 9

86. A boy started from his home and walked 12 meters towards the East. After that he turned left and walked 6 meters. Then he turned left again and walked 7 meters. Then again, he took a left and walked 10 meters. Then he turned right and walked 2 meter. There he stops. What is the shortest distance is he now from his home?

- A) 7 meters
- B) 3 meters
- C) 9 meters
- D) 5 meters



87. In the following question, the symbol \$, @, #, © and % are used with the following meanings as illustrated below:

- 'A \$ B' means A is smaller than or equal to B'
- 'A @ B' means A is greater than B'
- 'A # B' means A is greater than or equal to B'
- 'A © B' means A is smaller than B'
- 'A % B' means A is equal to B'



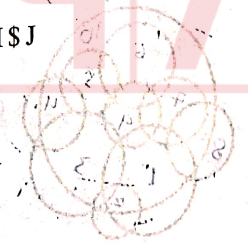
Assume the given statements to be true, find which of the three Conclusions I, II and III given below them is/are definitely true and give your answer accordingly?

Statements: $G @ E, F \% K, I @ K, G © I, H @ F, H \$ J$

Conclusions :

- I $E © I$
- II $G \$ F$
- III $F © J$
- A) Only II & III are true
- B) Only I & II are true
- C) Only I & III are true

9



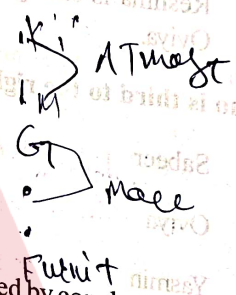
88. A shopping mall has six floors (including ground floor). Each floor assigned to sell— different items:

- i. e Male dresses, Female dresses, Kids dresses, Furniture, Groceries and Stationaries

At most two floors are above the Grocery floor. Two floors are between Grocery floor and Stationary floor. Female dresses floor is below the Stationaries floor. Kids dresses floor is three floor above the furniture floor. No floor is between Grocery floor and Male dresses floor. Male dresses floor is below the Kids dresses floor.

Which floor is the ground floor?

- A) Stationaries
- B) Female dresses
- C) Kids Dresses
- D) Furniture



89. In the question given below, three statements are followed by conclusions I,II,III,IV. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Statements:

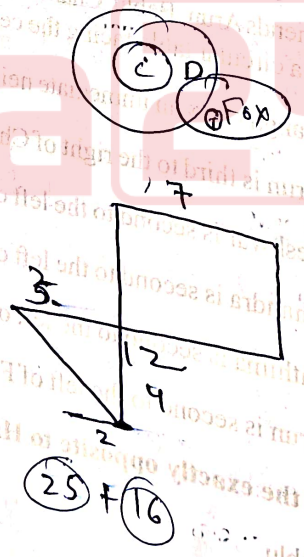
- 1. All Cats are dogs
- 2. Some Foxes are Dogs
- 3. All Tigers are Foxes

Conclusion:

- I. All Tigers are Dogs
- II. Some Tigers are Dogs
- III. Some Dogs are Foxes
- IV. All foxes are Dogs

Choose the correct option:

- A) Only I and III follows
- B) Only I follow
- C) Only II follows
- D) Only III follows



90. Read the given information carefully and answer the question that follow.

Eleven friends Mani, Nandhu, Oviya, Prem, Quereshi, Reshma, Sabeer, Tina, Umar, Vinod and Yasmin are sitting in the first row of a cinema theatre watching a movie.

1. Tina is to the immediate left of Prem and third to the right of Umar.
2. Vinod is the immediate neighbour of Mani and Nandhu and third to the left of Sabeer.
3. Mani is the second to the right of Quereshi, who is at one of the ends.
4. Reshma is sitting next to the right of Prem and Prem is second to the right of Oviya.

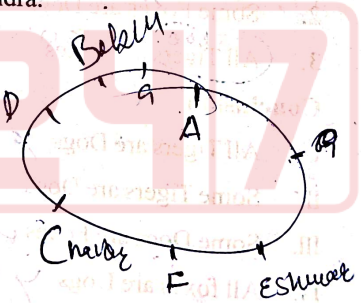
Who is third to the right of Prem?

- A) Sabeer
- B) Oviya
- C) Yasmin
- D) None of these

91. Study the given information carefully and answer the following question.

Eight friends Arun, Bablu, Chandra, Darwin, Eeshwar, Fathima, Ganga and Hari are sitting around a circular table facing the centre for having their lunch.

1. Ganga is not an immediate neighbor of Chandra.
2. Arun is third to the right of Chandra.
3. Eeshwar is second to the left of Chandra.
4. Chandra is second to the left of Bablu.
5. Fathima is second to the left of Darwin.
6. Arun is second to the left of Fathima.



Who is the exactly opposite to Hari?

- A) Bablu
- B) Arun
- C) Ganga
- D) Fathima

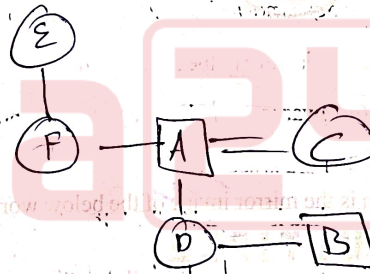
92. How many such pairs of letters are there in the word TELEVISION each of which has as many letters between them in the word as in the 26 English alphabet in any direction?
- A) Four
 - B) Five
 - C) Two
 - D) Three

93. How many Instances are there in the following number sequence such that there is an odd number between two even numbers?

4, 3, 6, 2, 2, 5, 6, 3, 7, 2, 7, 4, 2, 6, 4, 7, 9, 1, 3, 4, 8, 8, 1, 8, 3, 4, 5, 6

- A) Seven
 - B) Six
 - C) Four
 - D) Five
94. In a family of six members A, B, C, D, E and F only one married couple. Study the following information carefully about the family and answer the question given below:

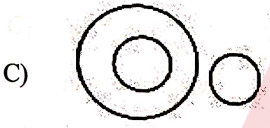
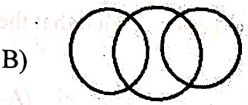
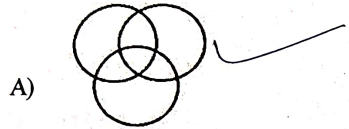
- I) A is wife of C
- II) F is brother of A.
- III) D is son of A.
- IV) E is father of F
- V) B is sister of D



How is A related to B?

- A) Mother-in-law
- B) Sister
- C) Mother
- D) Brother

95. Which of the following diagrams indicates the best relation between Doctor, Professor and Female?



96. Which is the mirror image of the below word?

MULTIPLE

A) **MULTIPLE**

B) **MULTIPLE**

~~C) **MULTIPLE**~~

D) **MULTIPLE**

97. Which among the following is the WATER image of the following word ?

SUCCESS

A) **22ECCU2**

B) **SUCCESS**

C) **SSUCCESS**

D) **2NCC22** ✓

98. What is the total number of squares in a standard chess board?

A) 204

B) 64 ✓

C) 64^2

D) $64!$

99. Some ducks were walking in a line. Where two ducks were in front of two ducks. Two ducks were behind two ducks and two ducks in between two ducks. Totally how many ducks were there?

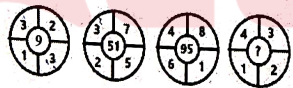
A) 4

B) 8 ✓

C) 10

D) 6

100. Find the Missing number in the given Puzzle.



A) 20

B) 12

C) 52

D) 40